TOWN OF LEXINGTON, MASSACHUSETTS
DEPARTMENT OF PUBLIC WORKS
LEXINGTON TOWN CENTER
TRAFFIC AND STREETSCAPE IMPROVEMENTS

FEBRUARY 2021

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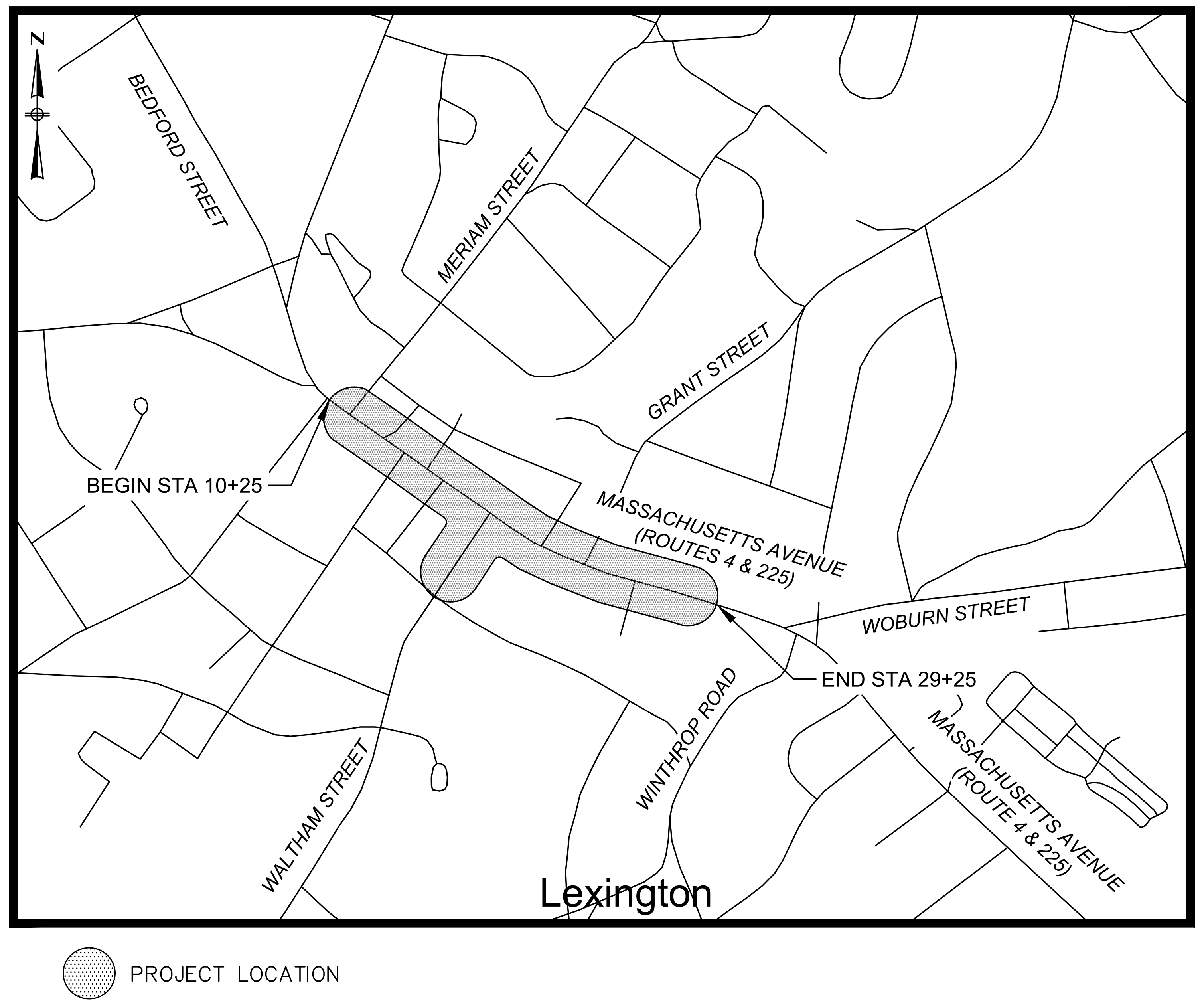

LOCATION MAP
1"=500'

LENGTH OF PROJECT: MASSACHUSETTS AVENUE - 1900 FEET
WALTHAM STREET - 407 FEET

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KIEN Y. HO
CIVIL ENGINEER
No. 46[illegible]31
2/8/21
REGISTERED PROFESSIONAL ENGINEER

LEGEND

GENERAL SYMBOLS

EXISTING	PROPOSED	
		CURB OR BERM (TYPE AS NOTED)
		EDGE OF PAVEMENT
□CB	▦CB	CATCH BASIN (OR GUTTER INLET, LEACHING BASIN, DROP INLET, CATCH BASIN CURB INLET)
○EHH	○EHH	ELECTRIC HANDHOLE (NUMBER AS NOTED)
Ⓔ	○ EMH	ELECTRIC MANHOLE
Ⓣ	○ TMH	TELEPHONE MANHOLE
Ⓦ	○ WMH	WATER MANHOLE
Ⓢ	Ⓢ SMH	SEWER MANHOLE
Ⓓ	Ⓓ DMH	DRAINAGE MANHOLE
○ GG	○ GG	GAS GATE
○ WG	○ WG	WATER GATE
○ CS	○ CS	CURB STOP
HYD.	HYD	HYDRANT
F FA	■ FAB	FIRE ALARM BOX
○ PM	○ ■	PARKING METER
LP		STREET LIGHT POLE
UP	UP	UTILITY POLE
UPL	UPL	UTILITY POLE w/ LIGHT
		SIGN
○— GUY	◐— GUY	GUY POLE
12" RCP D	10'-12" RCP	DRAIN PIPE (SIZE AND MATERIAL AS NOTED)
8" VCP S	10'-8" PVC	SEWER MAIN (SIZE AND MATERIAL AS NOTED)
E	10'-8" PVC	ELECTRIC DUCT
4" HP G	10'-4" HP	GAS MAIN (SIZE AND MATERIAL AS NOTED)
8" CI W	10'-8" DI	WATER MAIN (SIZE AND MATERIAL AS NOTED)
T	10'-8" PVC	TELEPHONE DUCT (SIZE AND MATERIAL AS NOTED)
EOH	OHW	OVERHEAD WIRE
□ MB	□ MB	MAIL BOX
		WOOD GUARD RAIL STEEL BEAM GUARD, WOOD OR STEEL POSTS (TYPE AS NOTED)
		STEEL GUARD RAIL, STEEL POSTS (TYPE NOTED)
		STONE WALL
		RETAINING WALL (TYPE NOTED)
⊡ BND	◘BND	HIGHWAY/PROPERTY BOUND (TYPE AS NOTED)
SHLO (Date of Layout)		STATE HIGHWAY LAYOUT LINE (SHLO)
		CITY, TOWN OR COUNTY LAYOUT LINE (R.O.W.)
Boundary Name		CITY, TOWN, COUNTY OR STATE BOUNDARY LINE
PL		PROPERTY LINE
		EASEMENT LINE (TYPE NOTED)
	2+00	CONSTRUCTION BASELINE
N00°00'00"E 000.00'		SURVEY LINE
		RAILROAD OR STREET RAILWAY TRACKS WITH SIDELINES
		WHEELCHAIR RAMP
● 24" PINE	+	TREE (SIZE AND TYPE AS NOTED)
		HEDGE/SHRUBS
X X X	x x x	FENCE (SIZE AND TYPE AS NOTED)
WF-1 △		EDGE OF WETLAND W/ FLAGGED NUMBER
		EDGE OF RIVER/STREAM LINE
		100-FT. WETLAND BUFFER LIMIT
		100-FT. RIVER FRONT LIMIT
		200-FT. RIVER FRONT LIMIT
		WOODED AREA / LIMIT OF CLEARING
x 00.0	x 00.00	SPOT GRADE
		SAW CUT LINE
	TP-1	TEST PIT
	B-1	BORING
ECB	ECB	EROSION CONTROL BARRIER/COMPOST FILTER TUBES

ABBREVIATIONS

GENERAL

ABAN	ABANDON
ADJ	ADJUST
ALT	ALTERATION
APPROX	APPROXIMATE
BL	BASELINE
BB	BITUMINOUS BERM
BC	BITUMINOUS CURB
BD OR BND	BOUND
BLDG	BUILDING
BO	BY OTHERS
BOS	BOTTOM OF SLOPE
BOW	BOTTOM OF WALL
BSW	BACK OF SIDEWALK
CC	CONCRETE CURB
CEM	CEMENT
CLF	CHAIN LINK FENCE
CONC	CONCRETE
CONST	CONSTRUCTION
CONT	CONTINUOUS
DWY	DRIVEWAY
EP, EOP	EDGE OF PAVEMENT
EL	ELEVATION
ELECT	ELECTRICAL
ESMT	EASEMENT
EXIST	EXISTING
FDN	FOUNDATION
GRAN	GRANITE
GC	GRANITE CURB
HOR	HORIZONTAL
IP	IRON PIPE
JCT	JUNCTION
LP	LOW POINT
MB	MAIL BOX
MHB	MASSACHUSETTS HIGHWAY BOUND
OC	ON CENTER
PCC	POINT OF COMPOUND CURVATURE
PC	POINT OF CURVATURE
PRC	POINT OF REVERSE CURVATURE
PI	POINT OF INTERSECTION
PT	POINT OF TANGENCY
PVC	POINT OF VERTICAL CURVATURE
PVI	POINT OF VERTICAL INTERSECTION
PVT	POINT OF VERTICAL TANGENCY
PERM	PERMANENT
PGL	PROFILE GRADE LINE
PROP	PROPOSED
PVC	POINT OF VERTICAL CURVATURE
PVMT	PAVEMENT
R	RADIUS OF CURVATURE
R&D	REMOVE AND DISCARD
R&R	REMOVE AND RESET
R&S	REMOVE AND STACK
REM	REMOVE
REMOD	REMODEL
RET	RETAIN
RR	RAILROAD
RT	RIGHT
SB	SOUTH BOUND OR STONE BOUND
SW	SIDEWALK
SHT	SHEET
SHLD	SHOULDER
STA	STATION
TEMP	TEMPORARY
TOS	TOP OF SLOPE
TOW	TOP OF WALL
TYP	TYPICAL
VAR	VARIABLE
VERT	VERTICAL
VGC	VERTICAL GRANITE CURB
WCR	WHEELCHAIR RAMP

TRAFFIC SIGNAL SYSTEMS

R	STEADY CIRCULAR RED
Y	STEADY CIRCULAR AMBER
G	STEADY CIRCULAR GREEN
FR	FLASHING CIRCULAR RED
FY	FLASHING CIRCULAR AMBER
←FY	FLASHING YELLOW LEFT ARROW
R→	STEADY RED RIGHT ARROW
Y→	STEADY AMBER RIGHT ARROW
G→	STEADY GREEN RIGHT ARROW
←R	STEADY RED LEFT ARROW
←Y	STEADY AMBER LEFT ARROW
←G	STEADY GREEN LEFT ARROW
W	STEADY WALK (PERSON WALKING) - LUNAR WHITE
DW	STEADY DON'T WALK (HAND) - PORTLAND ORANGE
FDW	FLASHING DON'T WALK (FLASHING HAND) - PORTLAND ORANGE

UTILITIES

ACCMP	ASPHALT COATED CORRUGATED METAL PIPE
CAP	CORRUGATED ALUMINUM PIPE
CB	CATCH BASIN
CBCI	CATCH BASIN WITH CURB INLET
CI	CURB INLET
CIP	CAST IRON PIPE
CIT	CHANGE IN TYPE
CMP	CORRUGATED METAL PIPE
C	CONDUIT
CPP	CORRUGATED PLASTIC PIPE
CSP	CORRUGATED STEEL PIPE
DI	DROP INLET
DIP	DUCTILE IRON PIPE
F&C	FRAME AND COVER
F&G	FRAME AND GRATE
FM	FORCE MAIN
GI	GUTTER INLET
GIP	GALVANIZED IRON PIPE
GG	GAS GATE
HDW	HEADWALL
HYD	HYDRANT
INV	INVERT ELEVATION
LP	LIGHT POLE
MH	MANHOLE
PVC	POLY-VINYL-CHLORIDE PIPE
PWW	PAVED WATER WAY
RCP	REINFORCED CONCRETE PIPE (CLASS III UNLESS NOTED)
SD	SUBDRAIN
SMH	SEWER MANHOLE
TS	TRAFFIC SIGNAL
TSV&B	TAPPING SLEEVE, VALVE AND BOX
UP	UTILITY POLE
UPL	UTILITY POLE w/ LIGHT
UPT	UTILITY POLE w/ TRANSFORMER
VCP	VITRIFIED CLAY PIPE
WIP	WROUGHT IRON PIPE
WG	WATER GATE
WM	WATER METER/WATER MAIN

TRAFFIC SIGNAL SYMBOLS

EXISTING	PROPOSED	
⊠	⧓	CONTROL CABINET GROUND MOUNTED WITH FOUNDATION
	⧓	CONTROL CABINET POLE MOUNTED
	Ø2	CONTROLLER PHASE
	MA-1	MAST ARM, SHAFT & BASE (ARM LENGTH AS NOTED)
		VEHICULAR SIGNAL HEAD (ALPHA-NUMERIC DESIGNATION AS NOTED)
		VEHICULAR SIGNAL HEAD, OPTICALLY PROGRAMMED
		VEHICULAR SIGNAL HEAD (REMOVED & RESET)
		FLASHING BEACON
		PEDESTRIAN SIGNAL HEAD
		PEDESTRIAN SIGNAL HEAD, OPTICALLY PROGRAMMED
□HH	⊠	PULL BOX 12"x12" OR HANDHOLE
		LOOP DETECTOR
⊕		PEDESTRIAN PUSH BUTTON, SIGN (DIRECTIONAL ARROW AS SHOWN) AND SADDLE
		PRE-EMPTION DETECTOR
		PRE-EMPTION CONFIRMATION STROBE
		SIGNAL CONDUIT (SINGLE RUN)
		SIGNAL CONDUIT (DOUBLE RUN)
	●	SIGNAL POST & BASE
M	M	MAGNETIC DETECTOR
		SCHOOL ZONE SPEED LIMIT SIGN
		MICROWAVE OR ULTRASONIC DETECTOR
		VIDEO DETECTION CAMERA
	▨	VIDEO DETECTION ZONE

PAVEMENT MARKINGS AND SIGNING SYMBOLS

PROPOSED

CW	CROSSWALK, 2 - 12" WHITE LINES (8" WIDTH)
SL	STOP LINE - 12" WHITE LINE 4' BEHIND CW (TYP.)
SWL	SOLID WHITE LINE - 4"
SWCHL	SOLID WHITE CHANNELIZING LINES - 12" (SPACING NOTED)
SWGL	SOLID WHITE GORE LINE 12" @ 45°, (SPACING NOTED)
SWPL	SOLID WHITE PARKING LINE - 4"
BWL	BROKEN WHITE LINE - 4"
DWLEx	DOTTED WHITE LANE EXTENSION LINE - 4" (2' LINE & 6' GAP)
DYLEx	DOTTED YELLOW LANE EXTENSION LINE - 4" (2' LINE & 6' GAP)
BYL	BROKEN YELLOW LINE - 4"
DBYL	DOUBLE YELLOW LINE - 2 - 4" LINES
SYL	SOLID YELLOW LINE - 4"
SYGL	SOLID YELLOW GORE LINE 12" @ 45°, (SPACING NOTED)
SCHOOL	SCHOOL ZONE - WHITE
♿	HANDICAP SYMBOL - WHITE
↱	PAVEMENT ARROW - WHITE
ONLY	LEGEND "ONLY" - WHITE

NUMBER	DATE	MADE BY	CHECKED BY	REVISIONS

DRAWN BY:
LF

DESIGNED BY:
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CHECKED BY:
DJ

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SUBCONSULTANT

SCALE
NONE
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TITLE
TOWN CENTER IMPROVEMENTS
LEGEND
LEXINGTON, MASSACHUSETTS

BETA JOB NO. 6331
ISSUE DATE 02/05/2021
SHEET NO. 2 OF 92

2/8/2021 12:03 PM O:\6300S\6331 - LEXINGTON CENTER STREETSCAPE\DRAWING FILES\PLANSET\6331 LEGEND.DWG (BETA STB BW.STB)

BEGINNING
OF PROJECT
STA 10+25
END
OF PROJECT
STA 29+25
BEDFORD STREET
CLARKE STREET
MERIAM STREET
DEPOT SQUARE
DEPOT SQUARE
MUZZEY STREET
WALTHAM STREET
EDISON WAY
GRANT STREET
WALLIS COURT
WOBURN STREET
MASSACHUSETTS AVENUE (ROUTES 4 & 225)
MASSACHUSETTS AVENUE (ROUTES 4 & 225)
11+36.61 MASSACHUSETTS AVENUE= 40+00.00 MERIAM STREET
13+29.69 MASSACHUSETTS AVENUE= 50+00.00 DEPOT SQUARE (WEST)
14+20.37 MASSACHUSETTS AVENUE= 60+00.00 MUZZEY STREET
15+21.49 MASSACHUSETTS AVENUE= 52+00.00 DEPOT SQUARE (EAST)
18+49.48 MASSACHUSETTS AVENUE= 0+00.00 WALTHAM STREET
21+12.25 MASSACHUSETTS AVENUE= 70+00.00 EDISON WAY
22+94.55 MASSACHUSETTS AVENUE= 80+00.00 GRANT STREET
24+85.82 MASSACHUSETTS AVENUE= 90+00.00 ONE WAY DWY
25+22.12 MASSACHUSETTS AVENUE= 100+00.00 WALLIS COURT
LIMIT OF PROJECT
STA 4+07
10+00
11+00
12+00
13+00
14+00
15+00
16+00
17+00
18+00
19+00
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29+00
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40+00
41+00
50+00
51+00
52+00
53+00
60+00
61+00
70+00
71+00
80+00
81+00
90+00
90+75
100+00
0+00
1+00
2+00
3+00
4+00
4+60
B-1
B-2
B-3
B-4
B-5
B-6
B-7
B-8
B-9
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44
51
65

Core #1

Material Type	Average
Top	2.000
Top	1.750
Top	2.250
Total	6.000"

Core #2

Material Type	Average
Top	4.000
Binder	2.250
Total	6.250"

Core #3

Material Type	Average
Top	4.000
Binder	2.500
Total	6.500"

Core #4

Material Type	Average
Top	4.500
Total	4.500"

Core #5

Material Type	Average
Top	2.000
Binder	2.500
Total	4.500"

Core #6

Material Type	Average
Top	3.000
Binder	2.250
Macadam	2.500
Total	7.750"

Core #7

Material Type	Average
Top	2.750
Binder	3.250
Total	6.000"

Core #8

Material Type	Average
Top	2.000
Top	2.500
Binder	2.250
Total	6.750"

Core #9

Material Type	Average
Top	3.000
Binder	2.500
Total	5.500"

Core #10

Material Type	Average
Top	2.500
Top	2.750
Total	5.250"

LEGEND

◈	PAVEMENT CORE

SHEET NUMBER LEGEND

XX	CONSTRUCTION PLAN
XX	TIE PLAN
XX	GRADING PLAN
XX	DRAINAGE & UTILITY PLAN
XX	SIGN AND PAVEMENT MARKING PLAN
XX	TRAFFIC SIGNAL PLAN
XX	SITE IMPROVEMENT PLAN
XX	PLANTING PLAN

2/8/2021 12:04 PM O:\6300S\6331 - LEXINGTON CENTER STREETSCAPE\DRAWING FILES\PLANSET\6331 KEYPLAN.DWG (BETA STB BW.STB)

NUMBER	DATE	MADE BY	CHECKED BY	REVISIONS

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SCALE
80 0 80 160
SCALE IN FEET: 1"=80'
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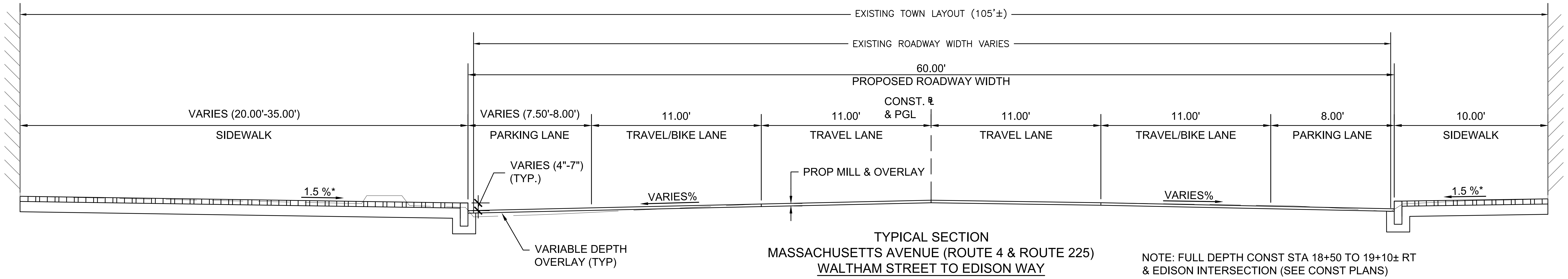
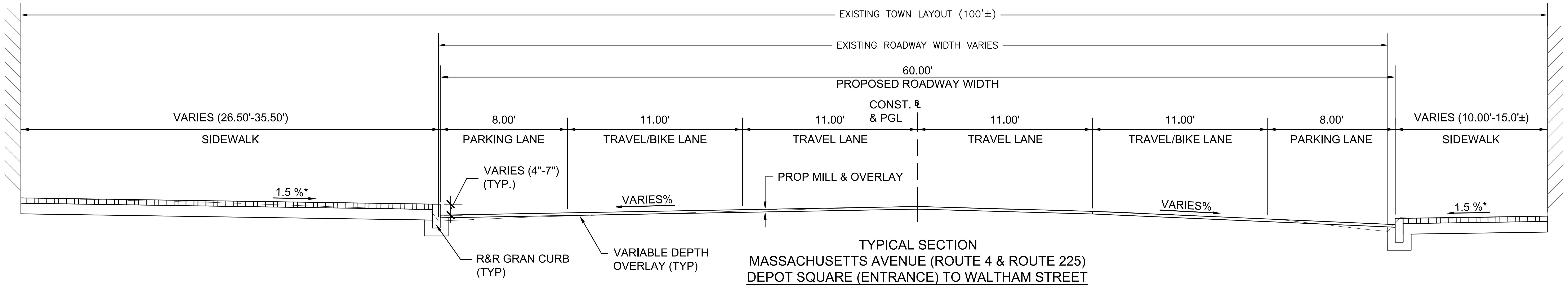
TITLE
TOWN CENTER IMPROVEMENTS
KEY PLAN & PAVEMENT CORE LOCATIONS
LEXINGTON, MASSACHUSETTS

BETA JOB NO. 6331
ISSUE DATE 02/05/2021
SHEET NO. 3 OF 92

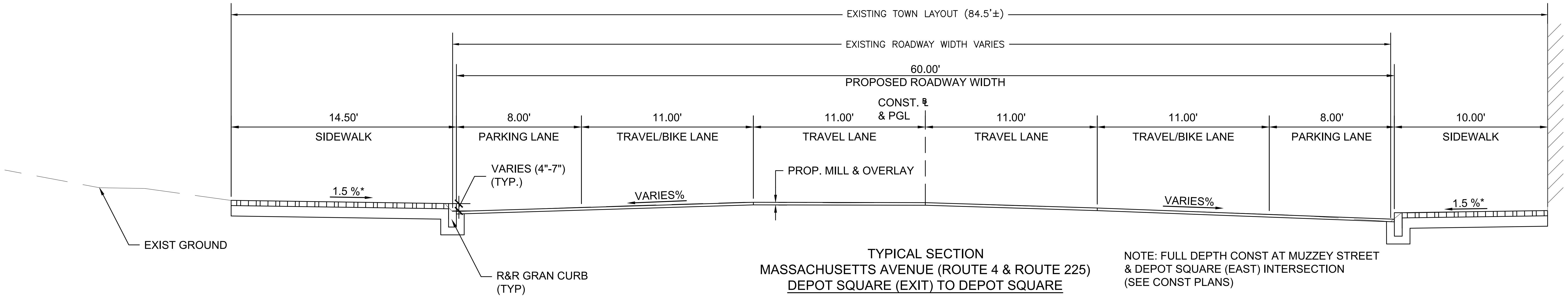


TYPICAL SECTION
MASSACHUSETTS AVENUE (ROUTE 4 & ROUTE 225)
WALTHAM STREET TO EDISON WAY
STA 18+50± TO 21+50±
NOT TO SCALE

NOTE: FULL DEPTH CONST STA 18+50 TO 19+10± RT
& EDISON INTERSECTION (SEE CONST PLANS)

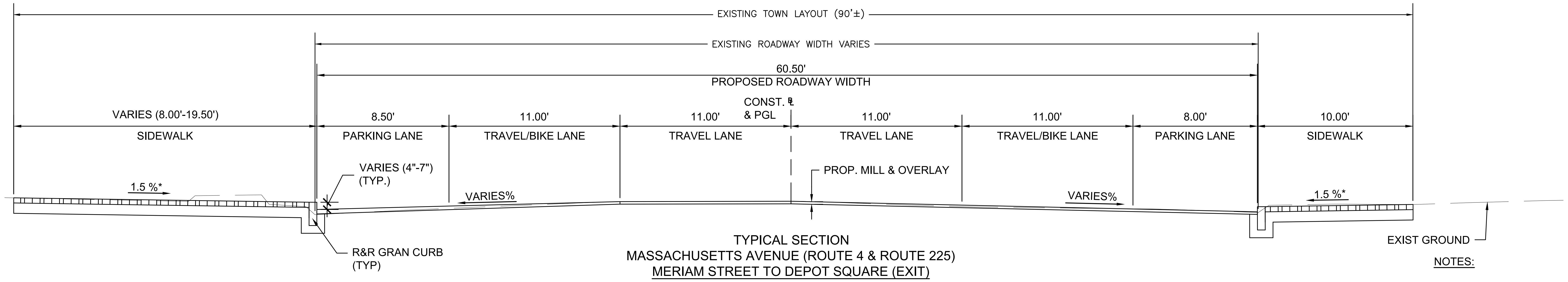


TYPICAL SECTION
MASSACHUSETTS AVENUE (ROUTE 4 & ROUTE 225)
DEPOT SQUARE (ENTRANCE) TO WALTHAM STREET
STA 15+50± TO 18+00±
NOT TO SCALE



TYPICAL SECTION
MASSACHUSETTS AVENUE (ROUTE 4 & ROUTE 225)
DEPOT SQUARE (EXIT) TO DEPOT SQUARE
STA 13+50± TO 15+50±
NOT TO SCALE

NOTE: FULL DEPTH CONST AT MUZZEY STREET
& DEPOT SQUARE (EAST) INTERSECTION
(SEE CONST PLANS)



TYPICAL SECTION
MASSACHUSETTS AVENUE (ROUTE 4 & ROUTE 225)
MERIAM STREET TO DEPOT SQUARE (EXIT)
STA 11+50± TO 13+50±
NOT TO SCALE

NOTES:

* SIDEWALK CROSS-SLOPE SHALL BE 1.5% WITH A CONSTRUCTION TOLERANCE OF 0.5%±
SEE CONST PLANS FOR SIDEWALK LIMITS AND TREATMENT

NUMBER	DATE	MADE BY	CHECKED BY	REVISIONS

DRAWN BY: JR
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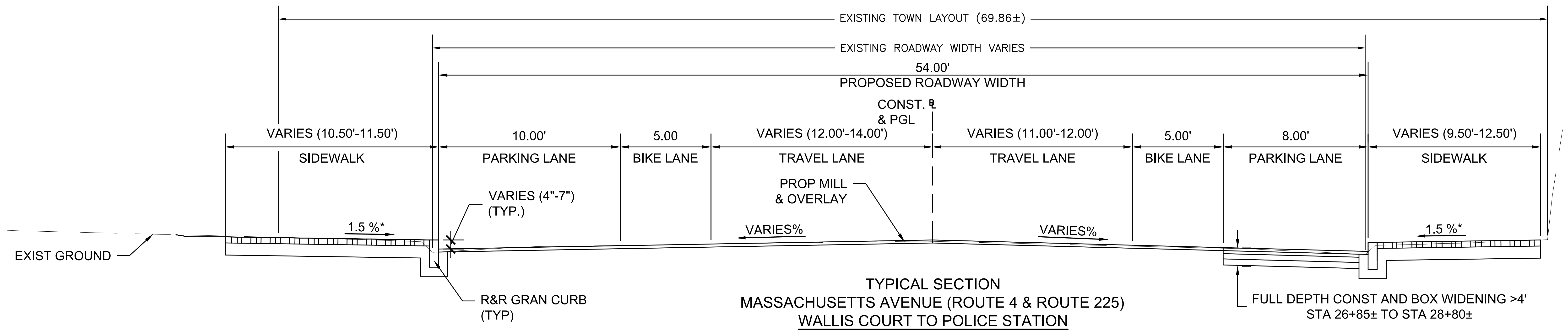
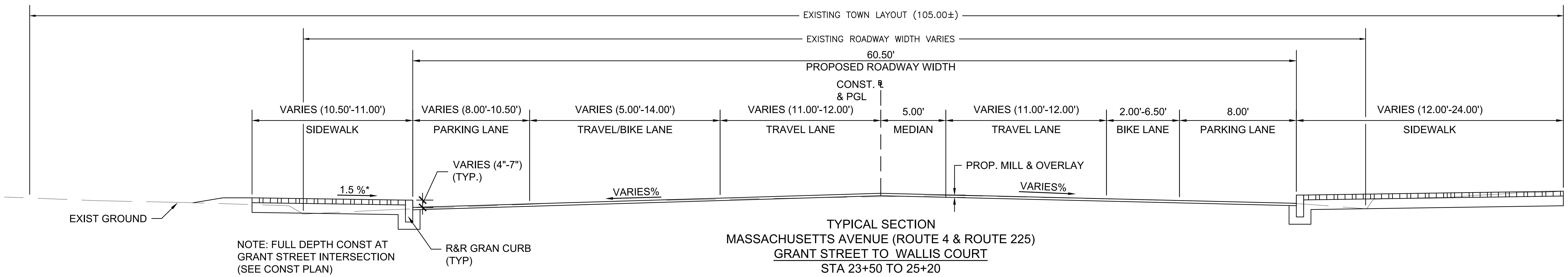
TITLE
TOWN CENTER IMPROVEMENTS
TYPICAL SECTIONS
LEXINGTON, MASSACHUSETTS

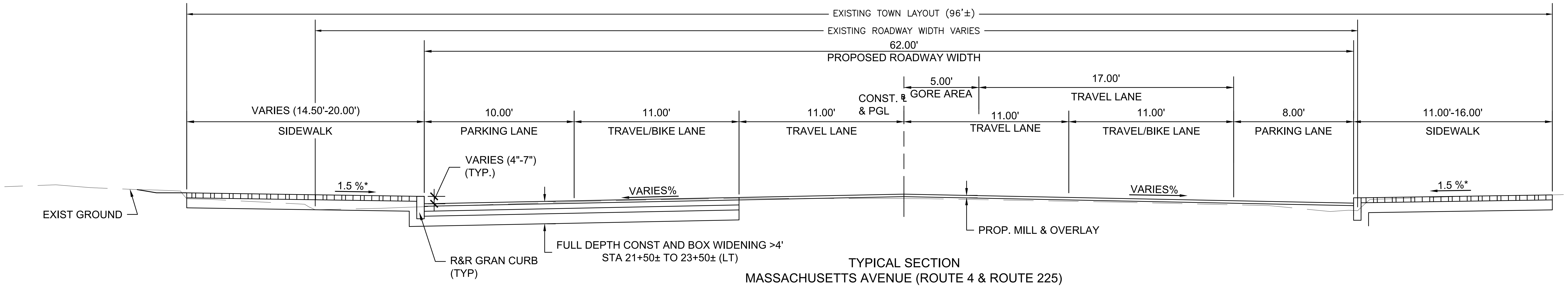
BETA JOB NO. 6331
ISSUE DATE 02/05/2021
SHEET NO. 4 OF 92



TYPICAL SECTION
MASSACHUSETTS AVENUE (ROUTE 4 & ROUTE 225)
WALLIS COURT TO POLICE STATION
STA 25+20 TO 28+80
NOT TO SCALE



TYPICAL SECTION
MASSACHUSETTS AVENUE (ROUTE 4 & ROUTE 225)
GRANT STREET TO WALLIS COURT
STA 23+50 TO 25+20
NOT TO SCALE



TYPICAL SECTION
MASSACHUSETTS AVENUE (ROUTE 4 & ROUTE 225)
EDISON WAY TO GRANT STREET
STA 21+50 TO 23+50
NOT TO SCALE

NOTES:

* SIDEWALK CROSS-SLOPE SHALL BE 1.5% WITH A CONSTRUCTION TOLERANCE OF 0.5%±
SEE CONST PLANS FOR SIDEWALK LIMITS AND TREATMENT

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TITLE
TOWN CENTER IMPROVEMENTS
TYPICAL SECTIONS
LEXINGTON, MASSACHUSETTS

BETA JOB NO. 6331
ISSUE DATE 02/05/2021
SHEET NO. 5 OF 92

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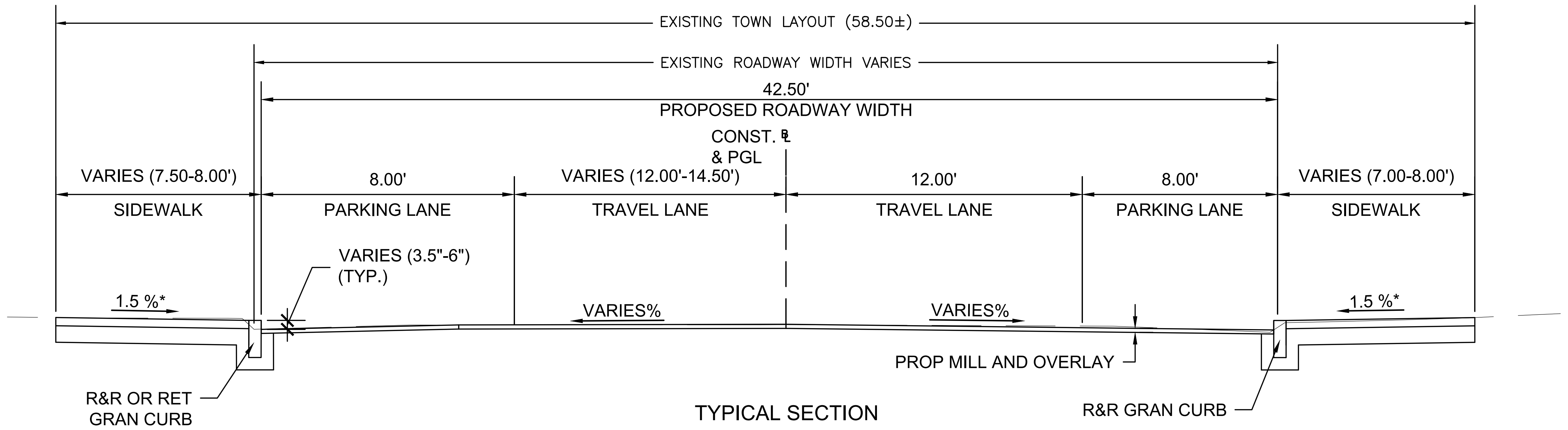
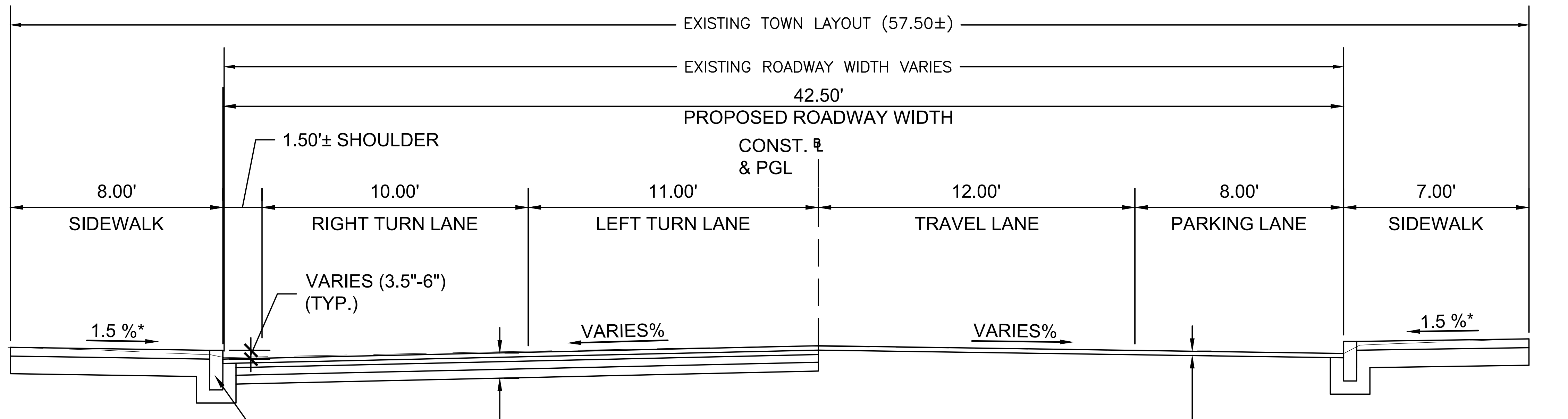


TYPICAL SECTION
WALTHAM STREET
STA 1+60± TO 4+08±
NOT TO SCALE

NOTE: FULL DEPTH CONST STA 1+60± TO STA 2+70± RT



TYPICAL SECTION
WALTHAM STREET
STA 0+00± TO 1+60±
NOT TO SCALE

NOTES:

* SIDEWALK CROSS-SLOPE SHALL BE 1.5% WITH A CONSTRUCTION TOLERANCE OF 0.5%±
SEE CONST PLANS FOR SIDEWALK LIMITS AND TREATMENT

NUMBER	DATE	MADE BY	CHECKED BY	REVISIONS

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TYPICAL SECTIONS
LEXINGTON, MASSACHUSETTS

BETA JOB NO. 6331
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2/8/2021 12:04 PM O:\6300S\6331 - LEXINGTON CENTER STREETSCAPE\DRAWING FILES\PLANSET\6331 TYP SEC.DWG (BETA STB BW.STB)

GENERAL NOTES

1. THE LOCATION OF SUBSURFACE UTILITIES SHOWN ON THE PLANS IS APPROXIMATE AND NOT GUARANTEED TO BE COMPLETE OR ACCURATE.THE CONTRACTOR SHALL VERIFY THE LOCATIONS, CONDITIONS AND ELEVATIONS OF EXISTING UTILITY LINES AND STRUCTURES PRIOR TO COMMENCEMENT OF WORK. THE CONTRACTOR MUST NOTIFY DIG SAFE PRIOR TO ANY EXCAVATION IN PUBLIC OR PRIVATE WAYS OR UTILITY COMPANY RIGHT OF WAY OR EASEMENT. ANY UTILITY POLES AND/OR GUY POLES, OR OTHER PRIVATELY-OWNED UTILITY STRUCTURES, WITHIN AREAS AFFECTED BY THE WORK, SHALL BE REMOVED AND RESET BY THE RESPECTIVE UTILITY COMPANY.
2. WHERE AN EXISTING UTILITY IS FOUND TO CONFLICT WITH THE PROPOSED WORK, THE LOCATION, ELEVATION AND SIZE OF THE UTILITY SHALL BE ACCURATELY DETERMINED WITHOUT DELAY BY THE CONTRACTOR, AND THE INFORMATION FURNISHED TO THE ENGINEER FOR THE RESOLUTION OF THE CONFLICT.
3. THE CONTRACTOR SHALL ALTER THE MASONRY OF THE TOP SECTION OF ALL EXISTING DRAINAGE AND SANITARY STRUCTURES AS NECESSARY FOR THE CHANGES IN GRADE, AND RESET ALL WATER AND DRAINAGE FRAMES, GRATES AND BOXES TO THE PROPOSED FINISH SURFACE GRADE. REQUIRED NEW MASONRY SHALL BE CLAY BRICK CONFORMING TO M4.05.2.
4. THE CONTRACTOR SHALL MAKE ALL ARRANGEMENTS FOR THE ALTERATION AND ADJUSTMENT OF GAS, ELECTRIC, TELEPHONE, CABLE TV, FIRE ALARM AND ANY OTHER PRIVATE UTILITIES BY THE UTILITY COMPANIES. ALL UTILITY CASTING AND FIRE ALARM BOXES SHALL BE ADJUSTED TO FINISH GRADE BY THEIR RESPECTIVE OWNERS.
5. ALL EXISTING WATER GATE BOXES, SERVICE BOXES, AND SEWER MANHOLES WITHIN PROPOSED SIDEWALK AND ROADWAY AREAS TO BE MILLED AND OVERLAYED OR RECONSTRUCTED SHALL BE ADJUSTED TO FINISH GRADE.
6. EXISTING DRAIN LINES WITHIN THE LIMITS OF PROPOSED CURB LINE SHALL BE REMOVED. WHERE PROPOSED DRAINAGE PIPES ARE LAID IN THE SAME TRENCH AS EXISTING PIPE, THE EXISTING PIPE SHALL BE REMOVED.
7. WHERE DRAINAGE PIPES OR STRUCTURES ARE ABANDONED IN PLACE THE CONTRACTOR SHALL MAKE SURE THAT ALL CONNECTING PIPES, INLETS AND OUTLETS ARE PLUGGED. ALL LIVE CONNECTIONS SHALL BE CONNECTED TO THE NEW SYSTEM. ANY EXISTING PRIVATE CONNECTIONS REQUIRE APPROVAL BY THE TOWN.
8. INVERT ELEVATIONS SHOWN ARE PROPOSED AND PROVIDED FOR BIDDING PURPOSES ONLY. THE CONTRACTOR SHALL VERIFY BY TEST PIT, THE LOCATIONS OF EXISTING UTILITIES WHICH MAY CONFLICT WITH THE PROPOSED DRAINAGE DESIGN. ANY FIELD ADJUSTMENTS REQUIRED WILL BE MADE AS APPROVED OR DIRECTED BY THE ENGINEER. ONLY AFTER THE CONTRACTOR VERIFIES ELEVATIONS FOR THE CONSTRUCTABILITY OF THE DRAINAGE SYSTEM SHALL ANY STRUCTURES BE ORDERED. INVERTS SHALL BE PROVIDED IN THE NEXT SUBMITTAL.
9. WHEN A PROPOSED CATCH BASIN INTERFERES WITH ANY UNDERGROUND UTILITY, A GUTTER INLET SHALL BE USED.
10. CATCH BASIN AND MANHOLE FRAMES AND GRATES/COVERS SHALL CLEARLY ALIGN WITH THE OPENINGS IN THE PRECAST STRUCTURES.
11. ALL DRAINAGE STRUCTURES SHALL BE RETAINED UNLESS NOTED OTHERWISE.
12. ALL FRAMES AND GRATES FOR PROPOSED DRAINAGE STRUCTURES SHALL BE MUNICIPAL STANDARD.
13. ALL CURB TIE DIMENSIONS ARE TO THE FACE OF THE CURB (GUTTER LINE).
14. ALL PROPOSED GRANITE CURB SHALL BE TYPE VA-4 UNLESS OTHERWISE NOTED ON THE PLAN.
15. PROPOSED SIDEWALKS AND WHEELCHAIR RAMPS SHALL BE CONSTRUCTED TO THE NEAREST SCORE LINE OR EXPANSION JOINT IN THE EXISTING ADJACENT WALK SURFACE AS DIRECTED BY THE ENGINEER.
16. PROPOSED SIDEWALK AND WHEELCHAIR RAMPS SCORE LINES AND EXPANSION JOINTS ARE SHOWN ON STREETSCAPE PLAN. THE CONTRACTOR SHALL COORDINATE WITH THE ENGINEER DURING CONSTRUCTION.
17. ALL DRIVEWAY LIMITS ARE AS SHOWN ON THE PLANS SHALL BE VERIFIED IN THE FIELD AND MAY BE ADJUSTED IF NECESSARY BY THE ENGINEER.
18. EXCESSIVELY CHIPPED OR BROKEN GRANITE CURB SHALL NOT BE REUSED. GRANITE CURB TO BE REUSED SHALL BE INSTALLED IN CONTINUOUS SECTIONS AND SHALL NOT BE INTERMIXED WITH NEW CURB.
19. SEE CONSTRUCTION DETAIL SHEETS FOR WHEELCHAIR RAMP DETAILS, TABLES AND NOTES.
20. THE PROPOSED SIDEWALK GRADE SHALL MEET THE EXISTING GRADE AT ALL STORE/BUSINESS DOOR ENTRANCE ELEVATIONS UNLESS OTHERWISE NOTED ON THE PLAN.
21. DUE TO THE PROJECT IN DOWNTOWN AREA, CONTRACTOR SHALL EXERCISE EXTREME CAUTION NOT TO DISTURB EXISTING STORE ENTRANCES, DOOR SILLS, VENTS, BUILDING STEPS OR FACES, WHEN CONSTRUCTING PROPOSED SIDEWALK. THE CONTRACTOR SHALL MEET ALL EXISTING GRADES AT THESE LOCATIONS UNLESS OTHERWISE SHOWN ON THE PLAN.
22. WHEN WORKING NEXT TO EXISTING WALLS, BERMS, AND OTHER STRUCTURES, CONTRACTOR SHALL EXERCISE EXTREME CAUTION NOT TO DISTURB THE EXISTING STRUCTURES. ANY DAMAGE TO THE EXISTING STRUCTURES SHALL BE REPAIRED BY THE CONTRACTOR AT HIS OWN EXPENSE.
23. PROPOSED TREE PLANTING, LANDSCAPE ISLAND AND OTHER AMENITIES ARE SHOWN ON STREETSCAPE PLANS AND DETAIL SHEETS.
24. THE ORNAMENTAL STREET LIGHTING LAYOUTS ARE SHOWN ON LIGHTING PLANS. THE DETAILS ARE SHOWN ON LIGHTING DETAIL SHEETS.
25. THE COORDINATES, IN FEET, ARE BASED UPON THE STATE PLANE COORDINATE SYSTEM 1983 AS DEFINED BY MASSACHUSETTS GEODETIC SURVEY STATION TRAVERSE POINT 200 AND TRAVERSE POINT 201.
26. ELEVATIONS, IN FEET, REFER TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88) AS DEFINED BY MASSACHUSETTS GEODETIC SURVEY STATION TRAVERSE POINT 200 AND TRAVERSE POINT 201.
27. SURVEY PLAN HAS BEEN PROVIDED BY THE TOWN OF LEXINGTON. SURVEY WAS CONDUCTED BY GCG ASSOCIATES, INC. IN APRIL OF 2018, APRIL-JUNE OF 2012, MARCH-MAY AND AUGUST OF 2013. SURVEY INCLUDES DETAIL FROM A TOPOGRAPHIC PLAN PREPARED BY DESIGN CONSULTANTS, INC. IN SEPTEMBER 2011. THE CONTRACTOR SHALL VERIFY BASEPLAN INFORMATION SHOWN ON THE PLANS TO ENSURE THAT CONSTRUCTION CAN PROCEED AS INTENDED.

WHEELCHAIR RAMP NOTES

1. ALL WHEELCHAIR RAMPS SHALL CONFORM TO THE REQUIREMENTS OF THE ARCHITECTURAL ACCESS BOARD (A.A.B), THE AMERICANS WITH DISABILITIES ACT (A.D.A.). AND MASSDOT WHEELCHAIR RAMP STANDARDS.
2. ALL PROPOSED CURB FOR WHEELCHAIR RAMP TRANSITIONS SHALL BE CUT AND TRANSITIONED AS NECESSARY TO PROVIDE THE CORRECT TRANSITION LENGTHS FOR EACH WHEELCHAIR RAMP, AS SHOWN ON WHEELCHAIR RAMP DETAILS OR AS DIRECTED BY THE ENGINEER. ANY EXISTING CURB INLETS, IN AREAS OF NEW WHEELCHAIR RAMP TRANSITIONS, SHALL BE REMOVED AND REPLACED WITH APPROPRIATE TRANSITION CURB, AS DIRECTED BY THE ENGINEER.
3. IN NO CASE, EXCEPT MAXIMUM LENGTH HIGH SIDE TRANSITIONS, SHALL ANY TRANSITION SLOPE OF ANY WHEELCHAIR RAMP EXCEED 7.5%.
4. IN INSTANCES WHERE AN EXISTING MANHOLE, HANDHOLE OR OTHER "SURFACE" TYPE STRUCTURE THAT CANNOT BE REMOVED OR RESET, IS WITHIN THE ACTUAL WHEELCHAIR RAMP PATH OR TRANSITIONS, THE STRUCTURE SHALL BE CAREFULLY ADJUSTED SUCH THAT THE TOPMOST SURFACES OF THE STRUCTURE COVER SHALL BE FLUSH WITH THE RAMP OR TRANSITION SURFACE AND SHALL MATCH THE SLOPE OF THE NEW WHEELCHAIR RAMP EXACTLY, AS DIRECTED BY THE ENGINEER.
5. THE LOCATION OF PROPOSED WHEELCHAIR RAMPS ARE SHOWN ON THE CONSTRUCTION PLANS AND THE WHEELCHAIR RAMP DETAILS. EXACT LOCATIONS MAY BE ADJUSTED, IF NECESSARY, BY THE ENGINEER IN THE FIELD.
6. DETECTABLE WARNING PANELS SHALL BE INSTALLED ON ALL WHEELCHAIR RAMPS IN ACCORDANCE WITH MASSDOT 2017 CONSTRUCTION STANDARD DWG E 107.6.5. COLOR SHALL BE FEDERAL YELLOW, OR AS APPROVED BY THE TOWN.

PAVEMENT NOTES

PAVEMENT MILLING AND OVERLAY (MASSACHUSETTS AVENUE AND SIDE STREETS)
MASSACHUSETTS AVENUE - STA 10+25 TO STA 17+75 LT & RT
STA 23+00 TO 25+50 RT
STA 25+50 TO 29+25 LT &RT

SURFACE COURSE:	1 3/4" SUPERPAVE SURFACE COURSE - 12.5 (SSC-12.5)
PAVEMENT MILLING:	0"-1 3/4" PAVEMENT MILLING (VARIABLE DEPTH MILLING)
LEVELING COURSE:	CLASS I BITUMINOUS CONCRETE PAVEMENT TYPE I-1 FOR LEVELING

PAVEMENT MILLING AND OVERLAY (MASSACHUSETTS AVENUE)
MASSACHUSETTS AVE - STA 17+75 TO STA 23+00 LT& RT
STA 23+00 TO 25+50 LT

SURFACE COURSE:	1 3/4" SUPERPAVE SURFACE COURSE - 12.5 (SSC-12.5)
INTERMEDIATE COURSE:	1 3/4" SUPERPAVE INTERMEDIATE COURSE - 12.5 (SIC-12.5)
PAVEMENT MILLING:	0"-3 1/2" PAVEMENT MILLING (VARIABLE DEPTH MILLING)
LEVELING COURSE:	SUPERPAVE LEVELING COURSE - 12.5 (SLC-12.5)

FULL DEPTH CONSTRUCTION AND BOX WIDENING GREATER THAN 4'

SURFACE COURSE:	1 3/4" SUPERPAVE SURFACE COURSE - 12.5 (SSC-12.5)
INTERMEDIATE COURSE:	1 3/4" SUPERPAVE INTERMEDIATE COURSE - 12.5 (SIC-12.5)
BASE COURSE:	4" SUPERPAVE BASE COURSE - 37.5 (SBC-37.5)
SUB-BASE:	4" DENSE GRADED CRUSHED STONE OVER 8" GRAVEL BORROW, TYPE b

CEMENT CONCRETE SIDEWALK

SURFACE COURSE:	4" CEMENT CONCRETE FIBER REINFORCED WITH LAMP BLACK ADDATIVE (AIR ENTRAINED 4000 PSI, 3/4", 610)
SUB BASE:	8" GRAVEL BORROW TYPE b OR COMBINATION OF EXISTING SUITABLE SUB BASE AS APPROVED BY THE ENGINEER

CEMENT CONCRETE DRIVEWAYS AND WHEELCHAIR RAMPS

SURFACE COURSE:	6" CEMENT CONCRETE FIBER REINFORCED W/ LAMP BLACK ADDATIVE (AIR ENTRAINED 4000 PSI, 3/4", 610)
SUB BASE:	8" GRAVEL BORROW TYPE b OR COMBINATION OF EXISTING SUITABLE SUB BASE AS APPROVED BY THE ENGINEER

HOT MIX ASPHALT DRIVEWAYS

SURFACE COURSE:	3 1/2" HMA DRIVEWAY PLACED IN TWO LAYERS, 1 1/2" SUPERPAVE SURFACE COURSE - 9.5 (SSC-9.5) OVER 2" SUPERPAVE INTERMEDIATE COURSE - 12.5 (SIC-12.5)
SUB BASE:	8" GRAVEL BORROW TYPE b OR COMBINATION OF EXISTING SUITABLE SUB BASE AS APPROVED BY THE ENGINEER

BRICK SIDEWALK (DRIVEWAY)

SURFACE COURSE:	BRICK PAVERS (HERRINGBONE PATTERN) 1" SAND SETTING BED OVER 4" (6" FOR DWY) FIBER REINFORCED CONCRETE BASE
SUB BASE:	8" GRAVEL BORROW TYPE b

TACK COAT NOTES

TACK COAT: ASPHALT EMULSION FOR TACK COAT, GRADE RS-1 SHALL BE PLACED AT A RATE OF:
- 0.07 GALLONS PER SQUARE YARD OVER MILLED SURFACES
- 0.07 GALLONS PER SQUARE YARD OVER CEMENT CONCRETE BASE COURSE
- 0.05 GALLONS PER SQUARE YARD OVER SMOOTH TIGHT PAVEMENTS PRIOR TO PAVING AN OVERLAY

NUMBER	DATE	MADE BY	CHECKED BY	REVISIONS

DRAWN BY: KY
DESIGNED BY: KY
CHECKED BY: DJ

REGISTERED PROFESSIONAL
KIEN Y. HO
CIVIL ENGINEER
2/8/21

PREPARED BY
BETA
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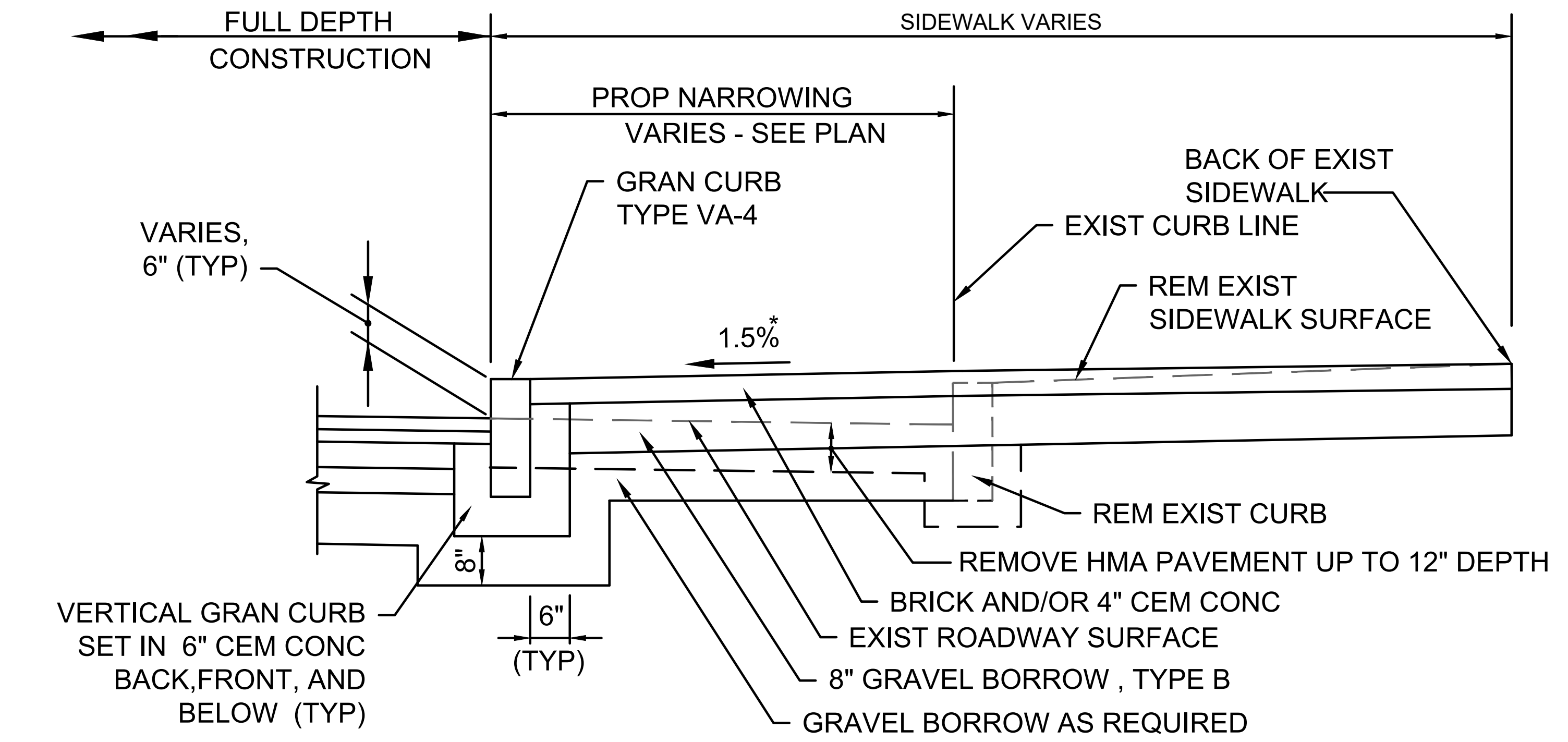
SUBCONSULTANT

SCALE
NONE
UNLESS OTHERWISE NOTED OR CHANGED BY REPRODUCTION

TITLE
TOWN CENTER IMPROVEMENTS
GENERAL NOTES & PAVEMENT NOTES
LEXINGTON, MASSACHUSETTS

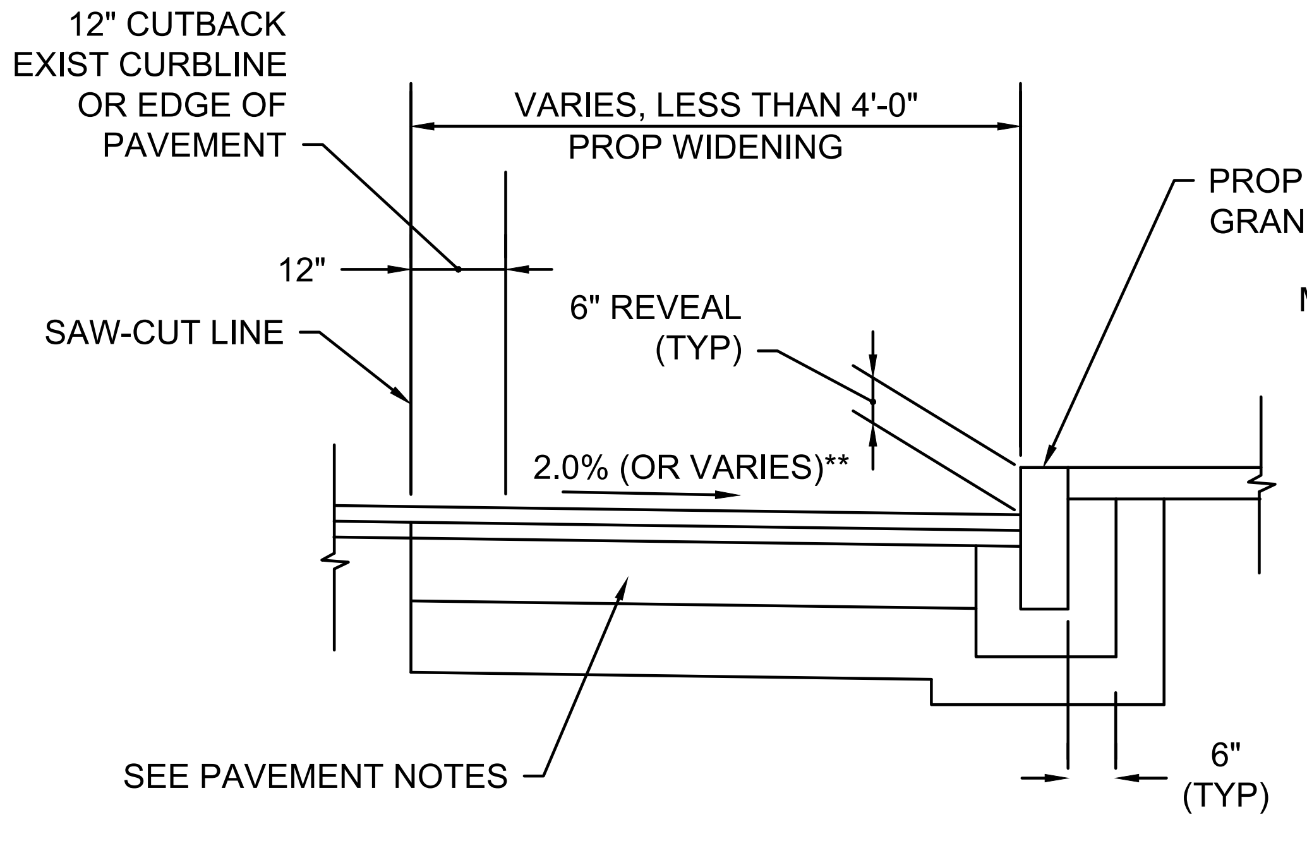
BETA JOB NO. 6331
ISSUE DATE 02/05/2021
SHEET NO. 7 OF 92

2/8/2021 12:04 PM O:\6300S\6331 - LEXINGTON CENTER STREETSCAPE\DRAWING FILES\PLANSET\6331 GENNOTES.DWG (BETA STB BW.STB)


FULL DEPTH CONSTRUCTION
SIDEWALK VARIES
PROP NARROWING VARIES - SEE PLAN
BACK OF EXIST SIDEWALK
GRAN CURB TYPE VA-4
EXIST CURB LINE
VARIES, 6" (TYP)
REM EXIST SIDEWALK SURFACE
1.5%*
REM EXIST CURB
REMOVE HMA PAVEMENT UP TO 12" DEPTH
BRICK AND/OR 4" CEM CONC
EXIST ROADWAY SURFACE
8" GRAVEL BORROW , TYPE B
GRAVEL BORROW AS REQUIRED
VERTICAL GRAN CURB SET IN 6" CEM CONC BACK,FRONT, AND BELOW (TYP)
8"
6" (TYP)

CURB AND SIDEWALK AT ROADWAY NARROWING IN FULL DEPTH AREA

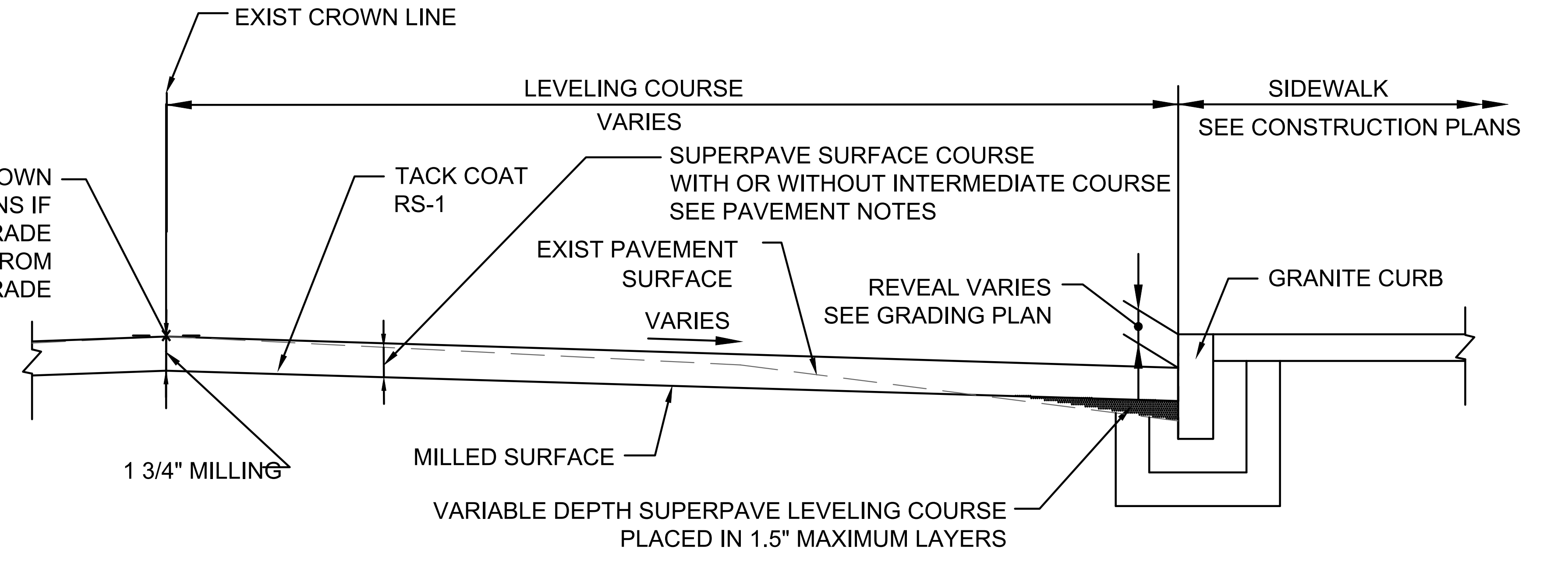
NOT TO SCALE



NOTE:
SEE PAVEMENT NOTES SHEET 7

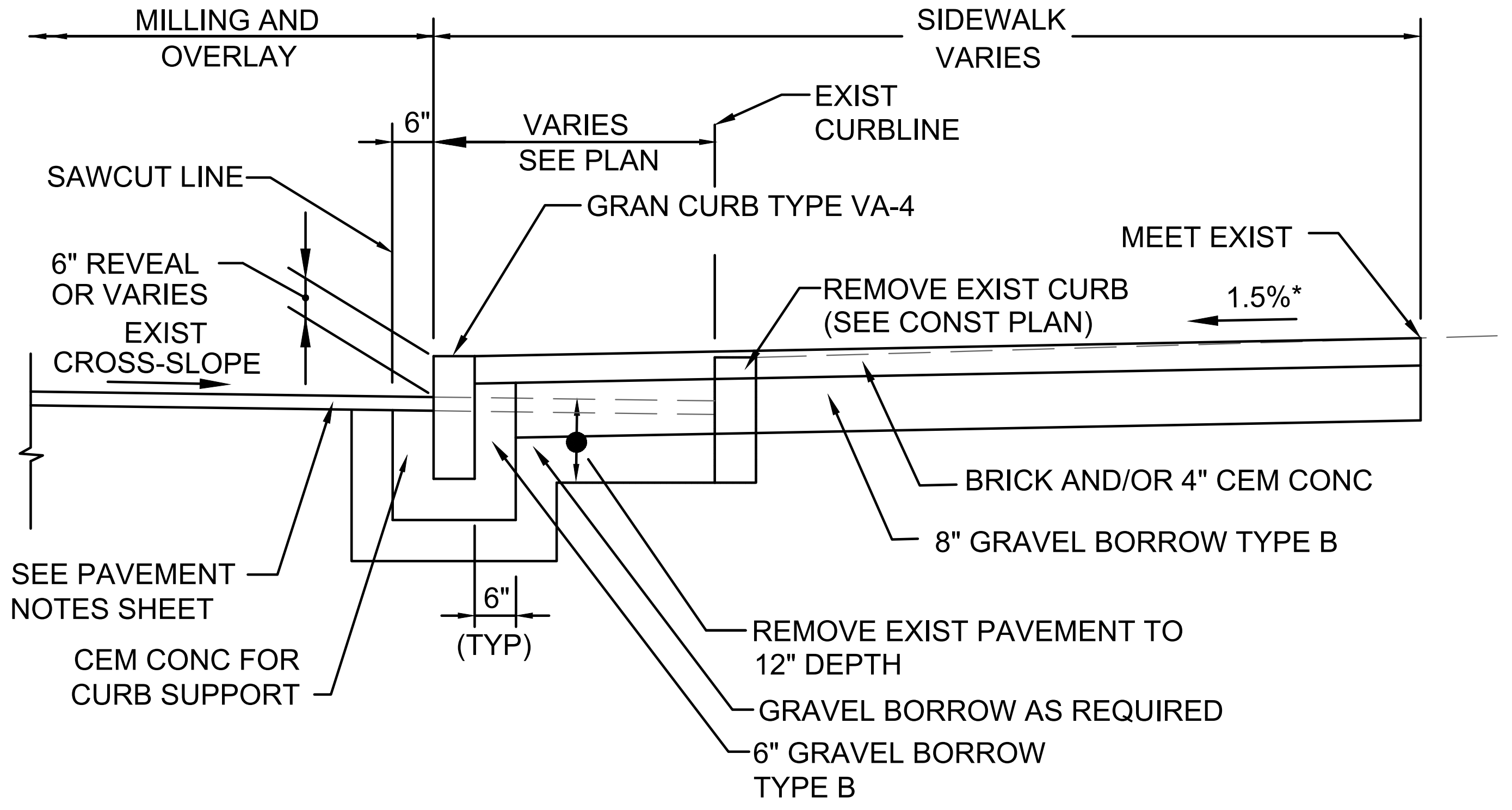
DETAIL FOR BOX WIDENING 4.0' OR LESS

NOT TO SCALE


EXIST CROWN LINE
LEVELING COURSE VARIES
SIDEWALK SEE CONSTRUCTION PLANS
MILL DEPTH SHOWN IN X-SECTIONS IF FINISHED GRADE DIFFERS FROM EXISTING GRADE
TACK COAT RS-1
SUPERPAVE SURFACE COURSE WITH OR WITHOUT INTERMEDIATE COURSE SEE PAVEMENT NOTES
EXIST PAVEMENT SURFACE
VARIES
REVEAL VARIES SEE GRADING PLAN
GRANITE CURB
1 3/4" MILLING
MILLED SURFACE
VARIABLE DEPTH SUPERPAVE LEVELING COURSE PLACED IN 1.5" MAXIMUM LAYERS

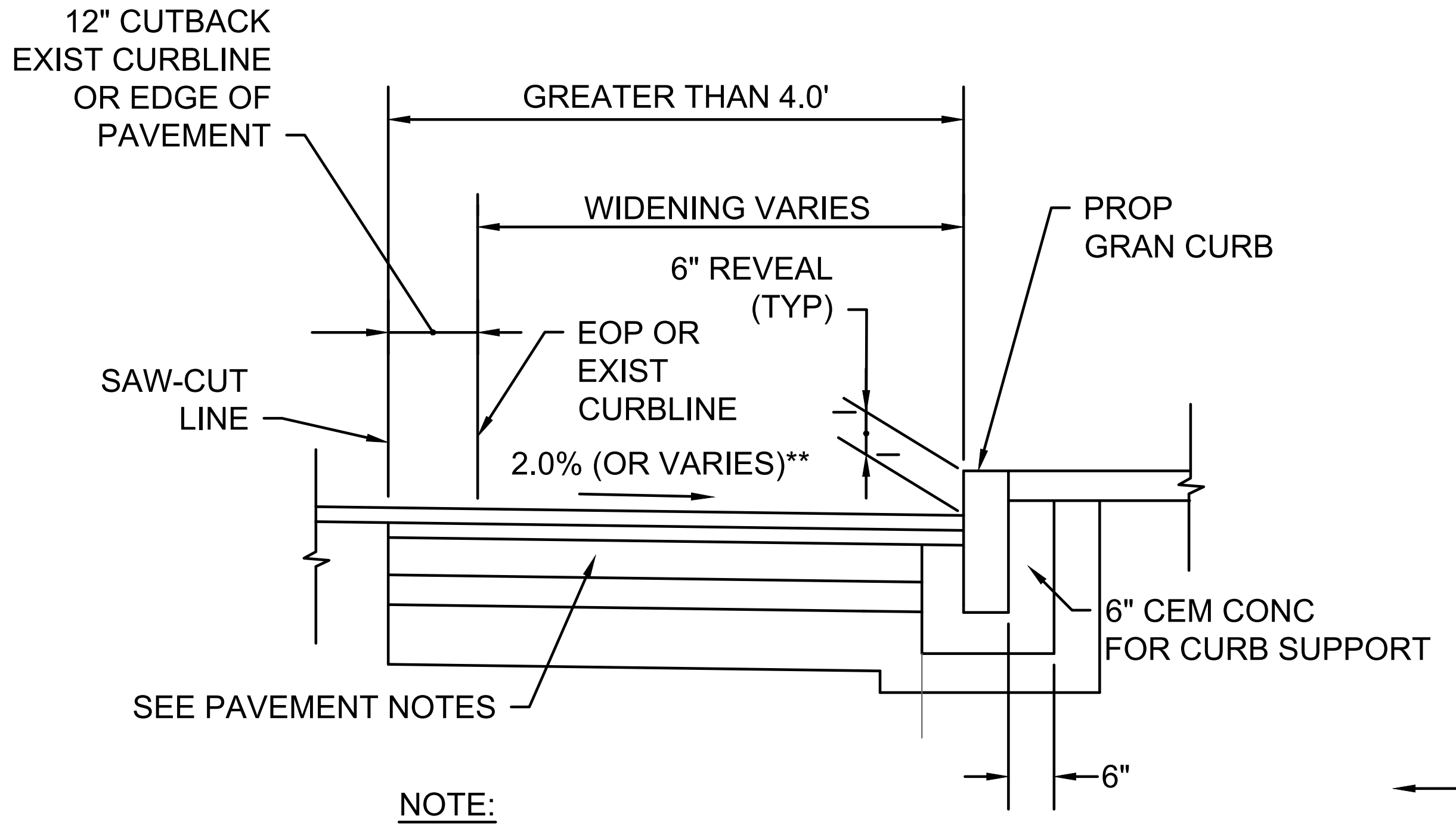
MILLING & OVERLAY WITH VARIABLE DEPTH MILLING & OVERLAY

NOT TO SCALE



CURB AND SIDEWALK AT ROADWAY NARROWING IN MILL & OVERLAY AREA

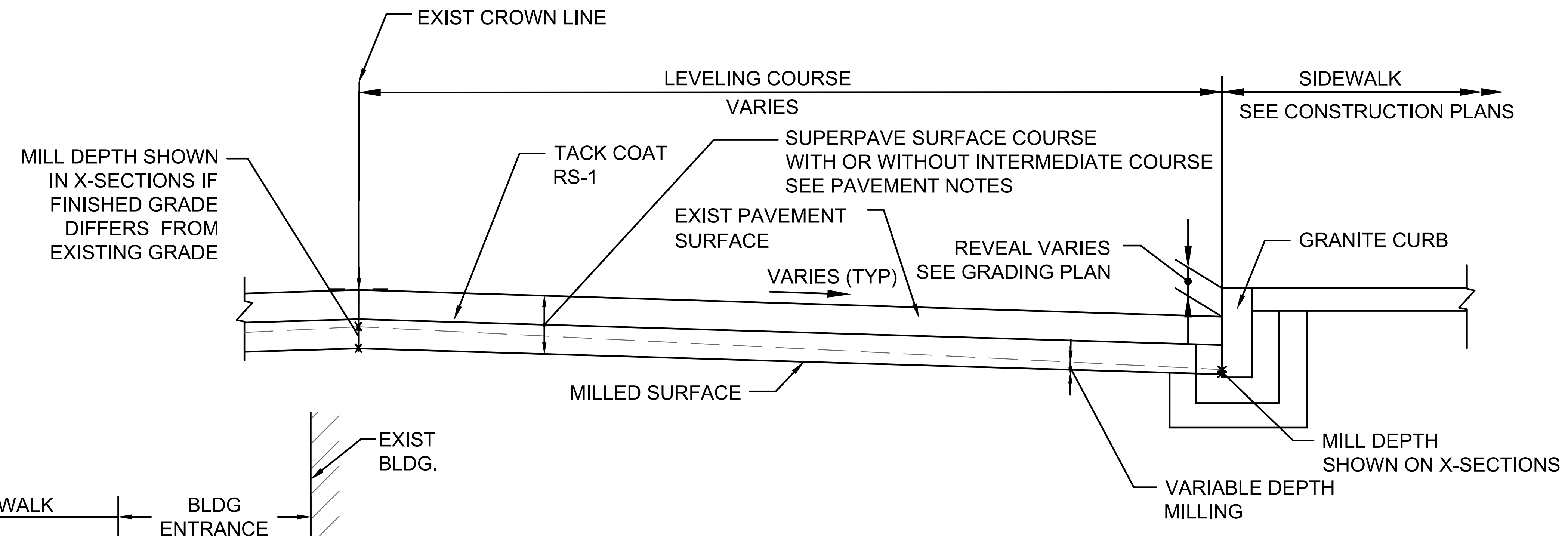
NOT TO SCALE



NOTE:
SEE PAVEMENT NOTES SHEET 7

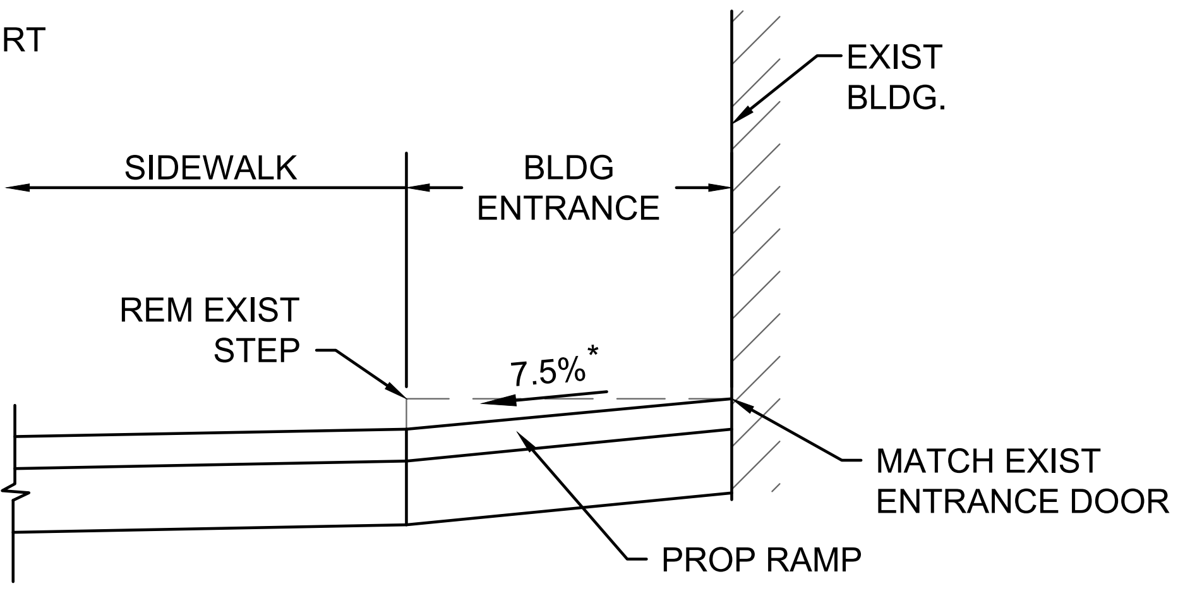
DETAIL FOR BOX WIDENING GREATER THAN 4.0'

NOT TO SCALE


EXIST CROWN LINE
LEVELING COURSE VARIES
SIDEWALK SEE CONSTRUCTION PLANS
MILL DEPTH SHOWN IN X-SECTIONS IF FINISHED GRADE DIFFERS FROM EXISTING GRADE
TACK COAT RS-1
SUPERPAVE SURFACE COURSE WITH OR WITHOUT INTERMEDIATE COURSE SEE PAVEMENT NOTES
EXIST PAVEMENT SURFACE
REVEAL VARIES SEE GRADING PLAN
GRANITE CURB
VARIES (TYP)
MILLED SURFACE
MILL DEPTH SHOWN ON X-SECTIONS
VARIABLE DEPTH MILLING

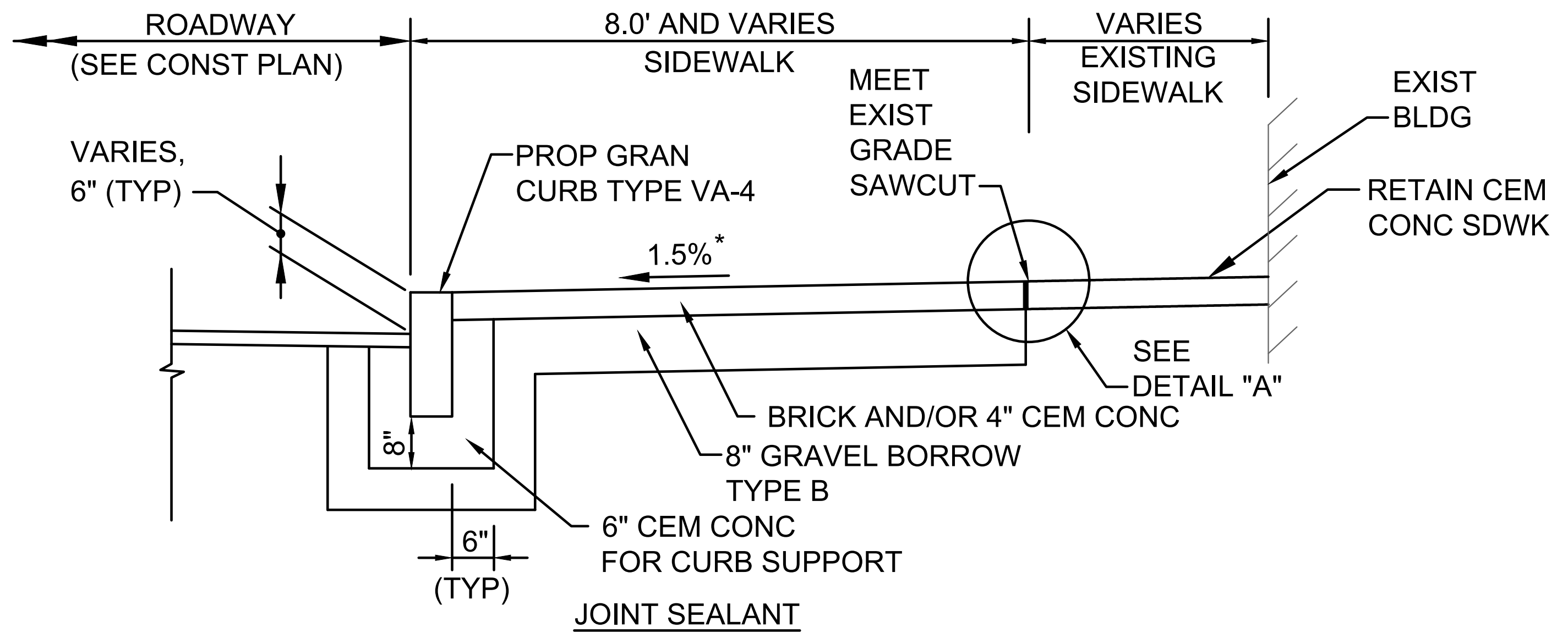
MILLING & OVERLAY WITH VARIABLE DEPTH MILLING

NOT TO SCALE



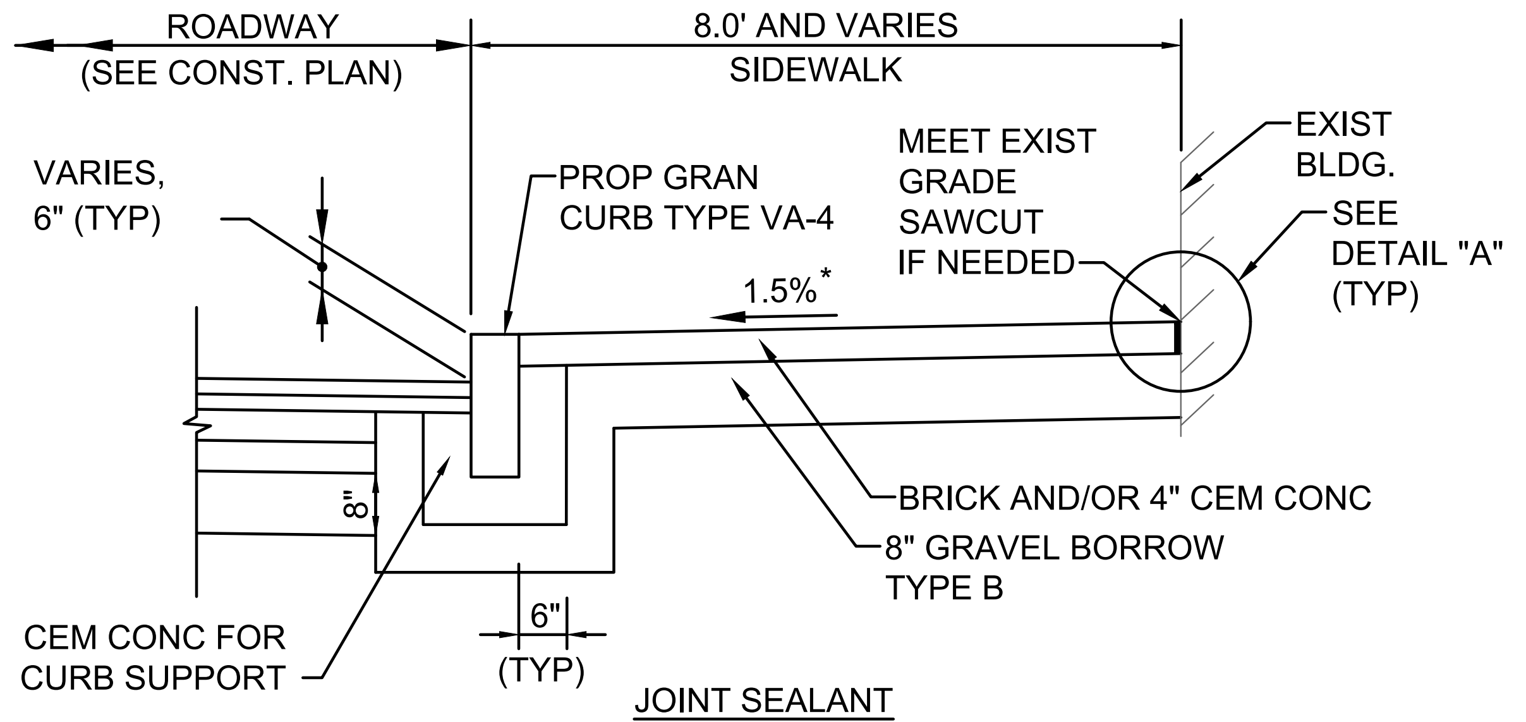
BUILDING ENTRANCE RAMP

NOT TO SCALE



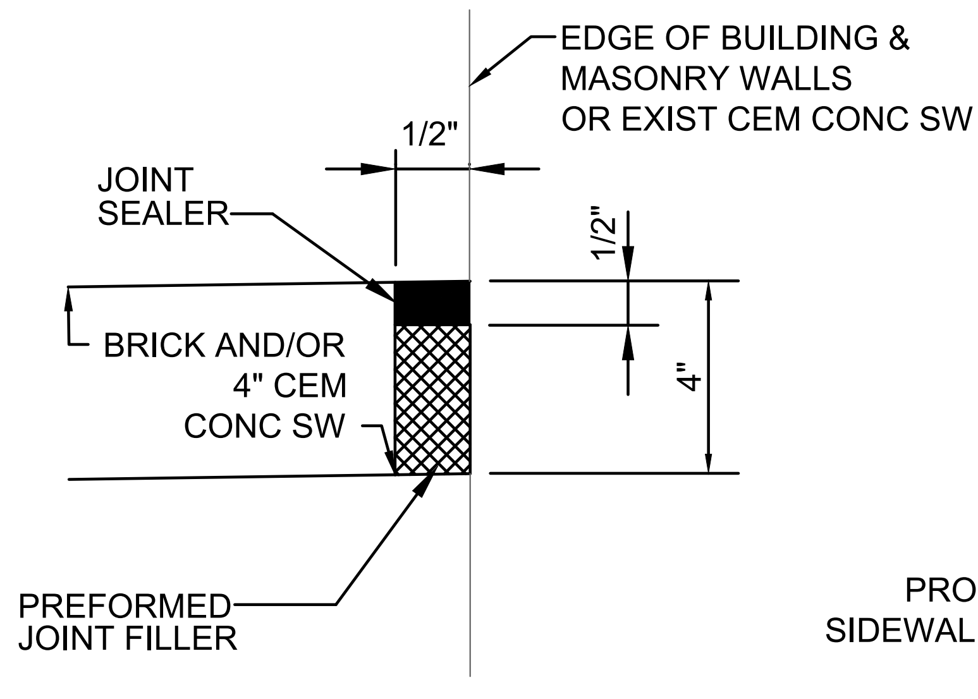
JOINT SEALANT AT EXISTING SIDEWALK TO REMAIN

NOT TO SCALE



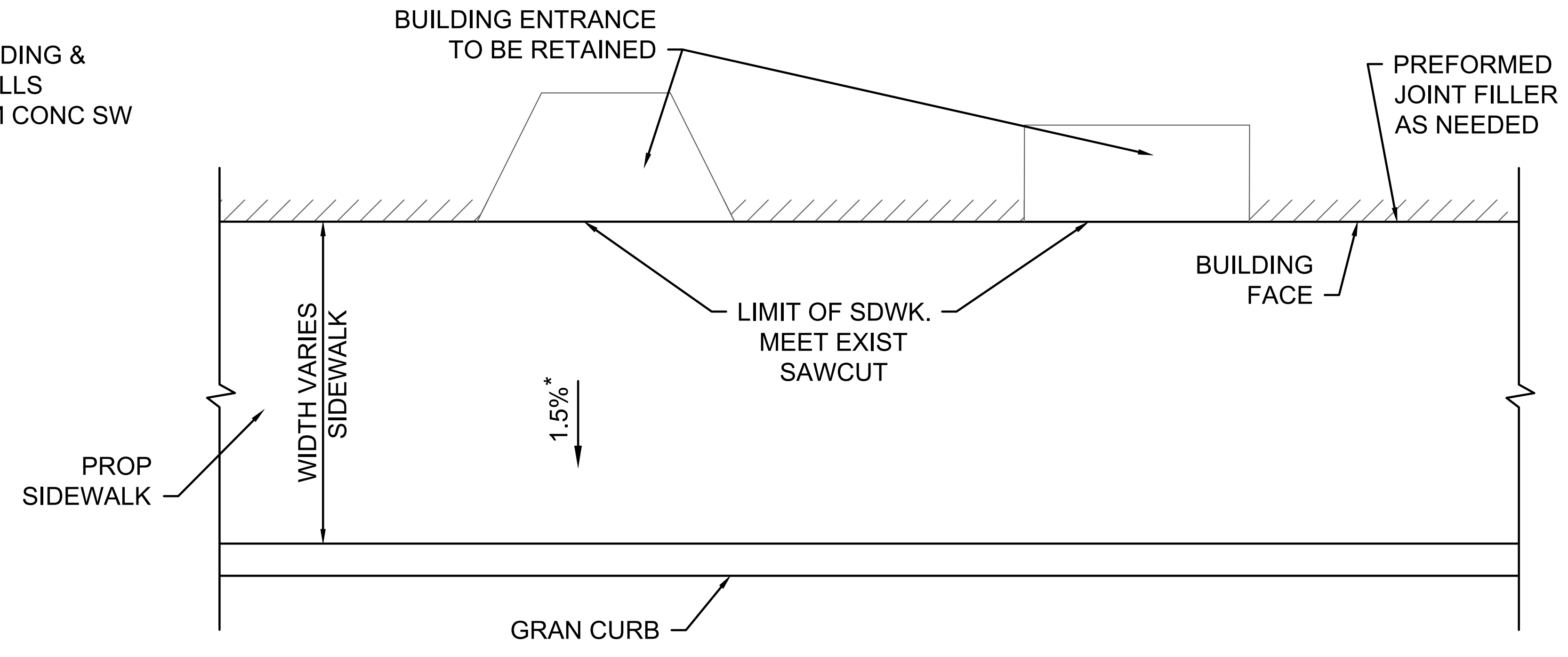
JOINT SEALANT AT BUILDING FACE

NOT TO SCALE


EDGE OF BUILDING & MASONRY WALLS OR EXIST CEM CONC SW
1/2"
JOINT SEALER
1/2"
BRICK AND/OR 4" CEM CONC SW
4"
PREFORMED JOINT FILLER

DETAIL "A"

NOT TO SCALE


BUILDING ENTRANCE TO BE RETAINED
PREFORMED JOINT FILLER AS NEEDED
BUILDING FACE
LIMIT OF SDWK. MEET EXIST SAWCUT
WIDTH VARIES SIDEWALK
1.5%*
PROP SIDEWALK
GRAN CURB

TYPICAL SIDEWALK IN FRONT OF BUILDING ENTRANCE

NOT TO SCALE

2/8/2021 12:04 PM O:\6300S\6331 - LEXINGTON CENTER STREETSCAPE\DRAWING FILES\PLANSET\6331 DETAILS.DWG (BETA STB BW.STB)

NUMBER	DATE	MADE BY	CHECKED BY	REVISIONS

DRAWN BY: DW
DESIGNED BY: KY
CHECKED BY: DJ

REGISTERED PROFESSIONAL
KIEN Y. HO
CIVIL ENGINEER
No. 46[illegible]31
Kien y Ho
2/8/21

PREPARED BY
BETA
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SUBCONSULTANT

SCALE
NONE
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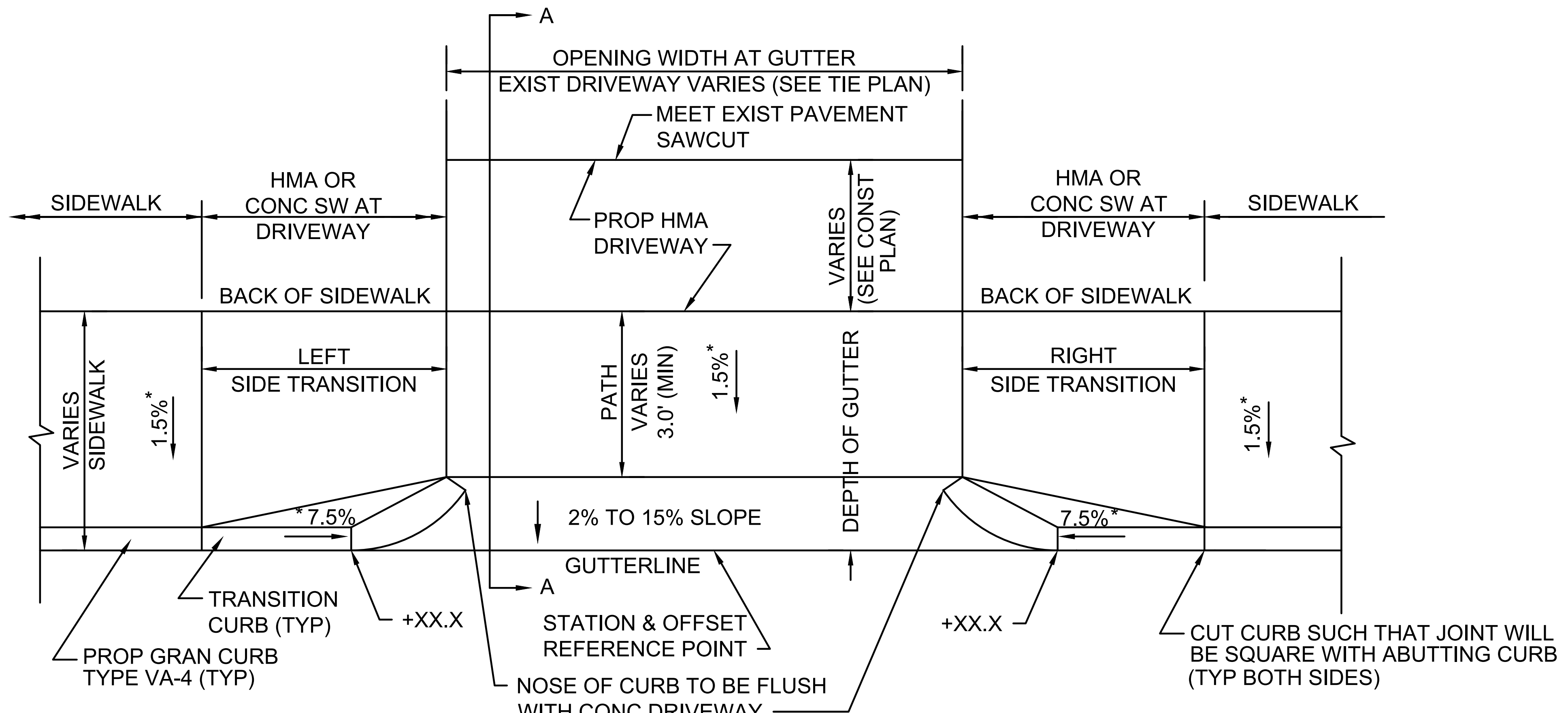
TITLE
TOWN CENTER IMPROVEMENTS
CONSTRUCTION DETAILS
LEXINGTON, MASSACHUSETTS

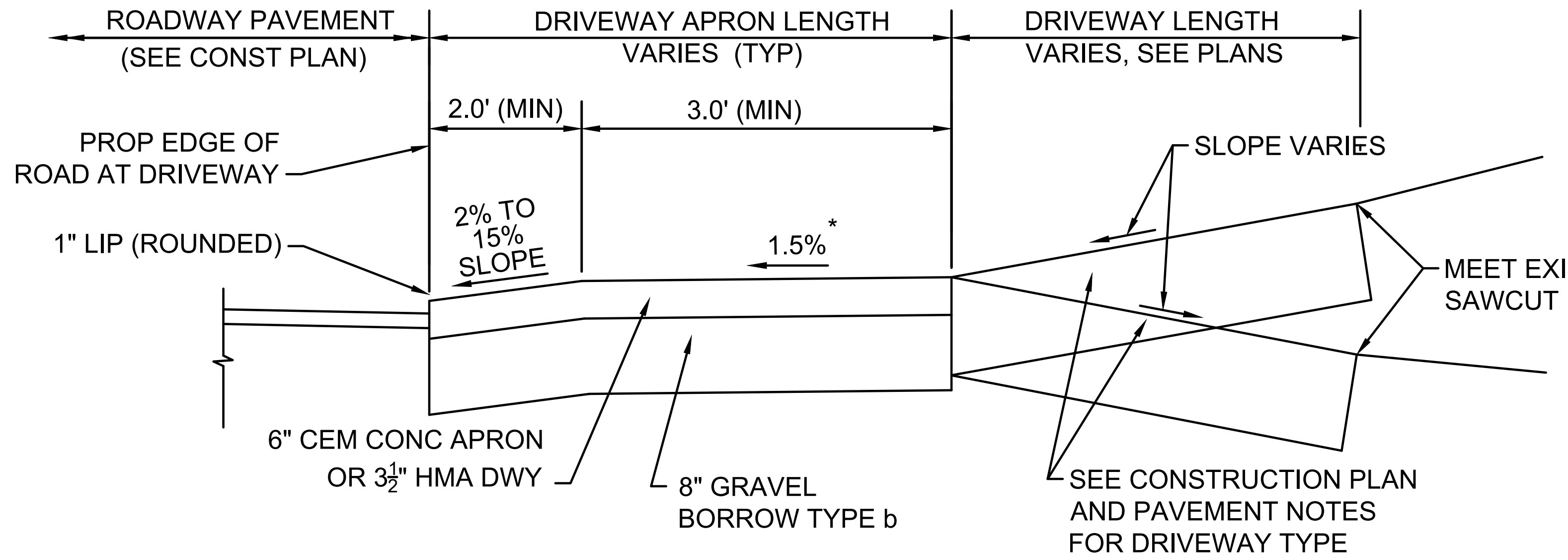
BETA JOB NO. 6331
ISSUE DATE 02/05/2021
SHEET NO. 8 OF 92


A
OPENING WIDTH AT GUTTER
EXIST DRIVEWAY VARIES (SEE TIE PLAN)
MEET EXIST PAVEMENT SAWCUT
SIDEWALK
HMA OR CONC SW AT DRIVEWAY
PROP HMA DRIVEWAY
VARIES (SEE CONST PLAN)
HMA OR CONC SW AT DRIVEWAY
SIDEWALK
BACK OF SIDEWALK
BACK OF SIDEWALK
LEFT SIDE TRANSITION
PATH VARIES 3.0' (MIN)
1.5%*
DEPTH OF GUTTER
RIGHT SIDE TRANSITION
VARIES SIDEWALK
1.5%*
1.5%*
*7.5%
2% TO 15% SLOPE
7.5%*
GUTTERLINE
A
TRANSITION CURB (TYP)
+XX.X
STATION & OFFSET REFERENCE POINT
+XX.X
CUT CURB SUCH THAT JOINT WILL BE SQUARE WITH ABUTTING CURB (TYP BOTH SIDES)
PROP GRAN CURB TYPE VA-4 (TYP)
NOSE OF CURB TO BE FLUSH WITH CONC DRIVEWAY

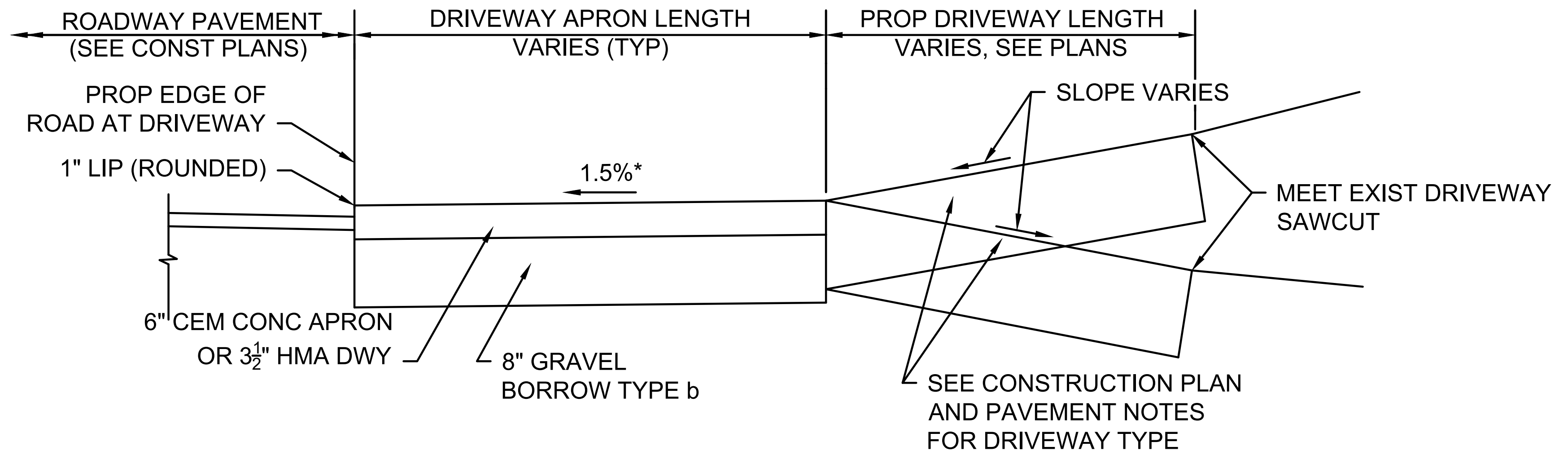
PLAN
NOT TO SCALE

NOTE: SEE CURB TIE AND GRADING PLAN SHEET XX FOR +XX.X STATION LOCATION

DETAIL FOR TYPICAL DRIVEWAY WITH SIDEWALK

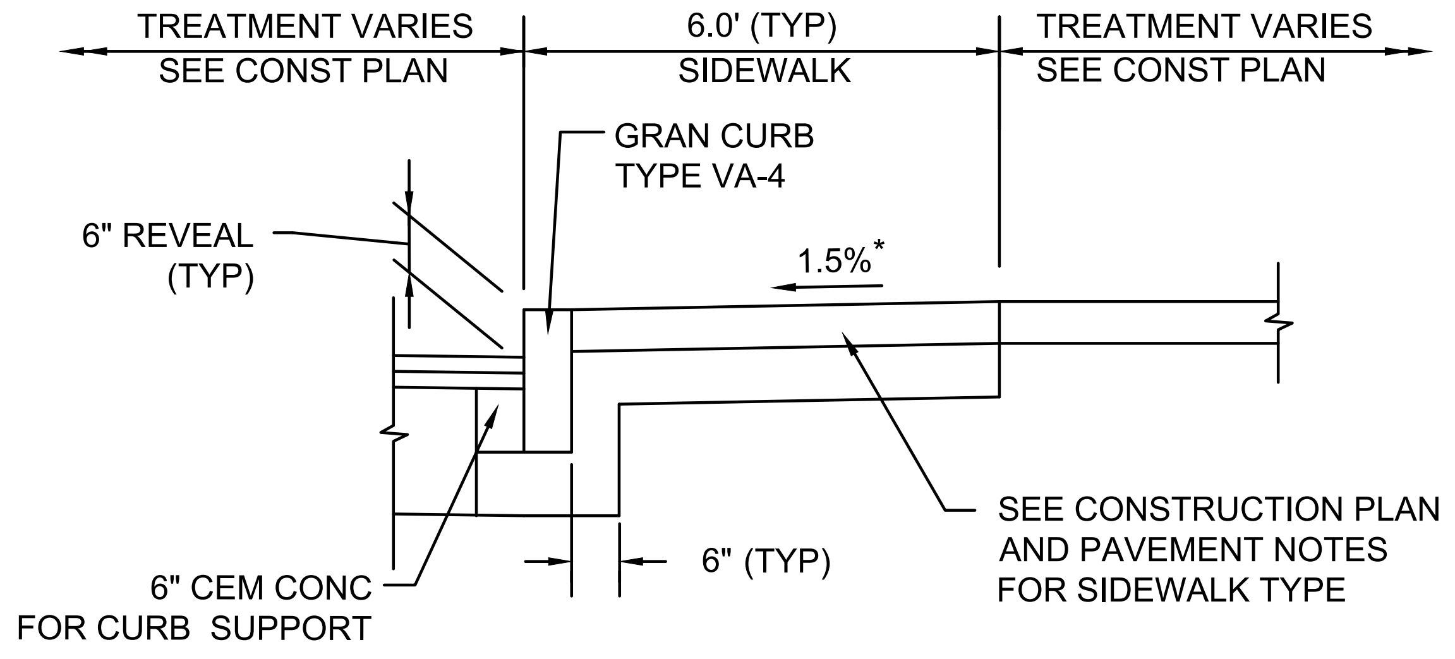

ROADWAY PAVEMENT (SEE CONST PLAN)
DRIVEWAY APRON LENGTH VARIES (TYP)
DRIVEWAY LENGTH VARIES, SEE PLANS
2.0' (MIN)
3.0' (MIN)
PROP EDGE OF ROAD AT DRIVEWAY
SLOPE VARIES
1" LIP (ROUNDED)
2% TO 15% SLOPE
1.5%*
MEET EXIST DWY SAWCUT
6" CEM CONC APRON OR 3½" HMA DWY
8" GRAVEL BORROW TYPE b
SEE CONSTRUCTION PLAN AND PAVEMENT NOTES FOR DRIVEWAY TYPE

SECTION A-A FOR TYPICAL DRIVEWAY WITH SIDEWALK
NOT TO SCALE

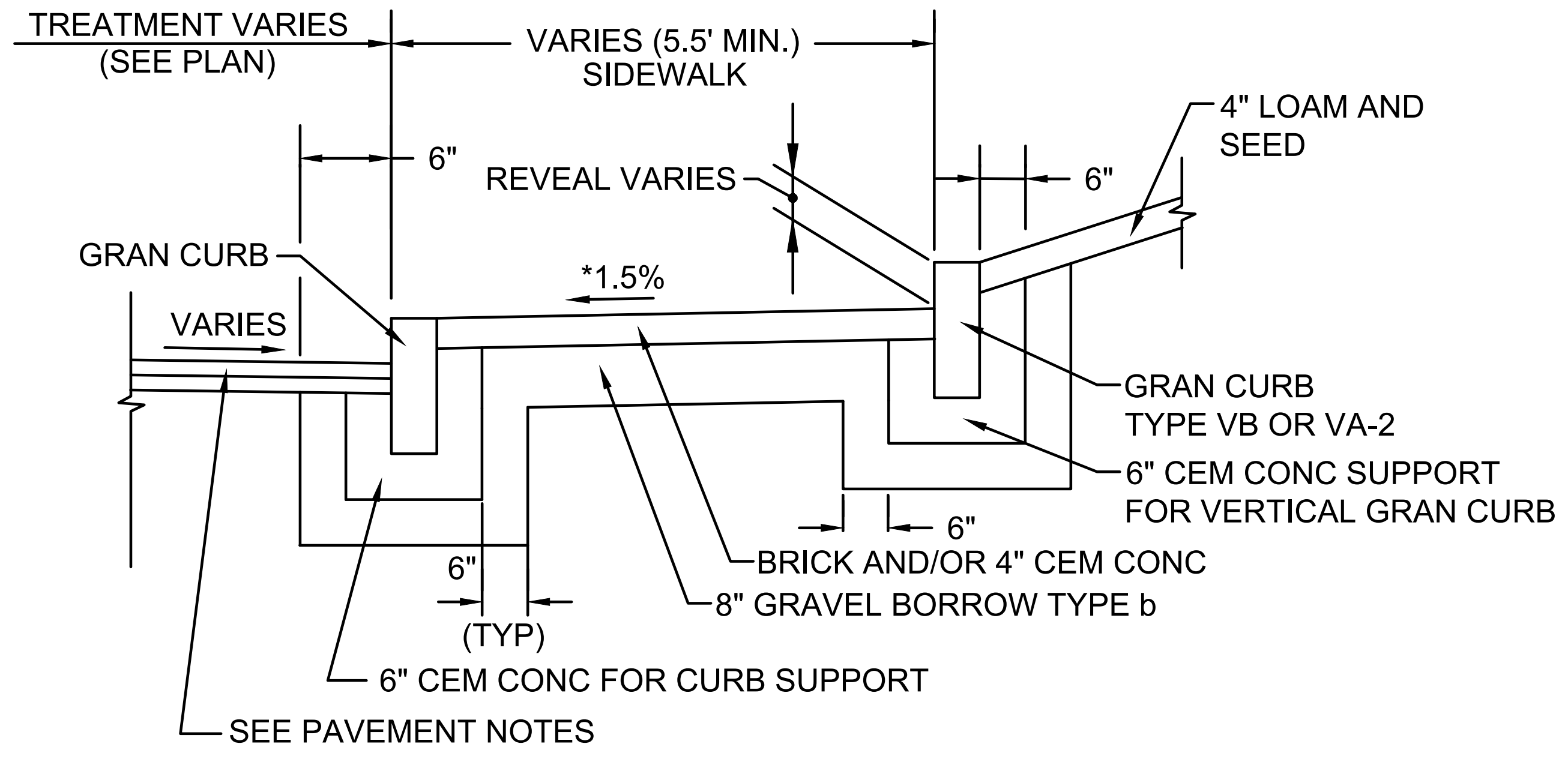

ROADWAY PAVEMENT (SEE CONST PLANS)
DRIVEWAY APRON LENGTH VARIES (TYP)
PROP DRIVEWAY LENGTH VARIES, SEE PLANS
PROP EDGE OF ROAD AT DRIVEWAY
SLOPE VARIES
1" LIP (ROUNDED)
1.5%*
MEET EXIST DRIVEWAY SAWCUT
6" CEM CONC APRON OR 3½" HMA DWY
8" GRAVEL BORROW TYPE b
SEE CONSTRUCTION PLAN AND PAVEMENT NOTES FOR DRIVEWAY TYPE

SECTION A-A FOR DEPRESSED DRIVEWAY WITH SIDEWALK
NOT TO SCALE

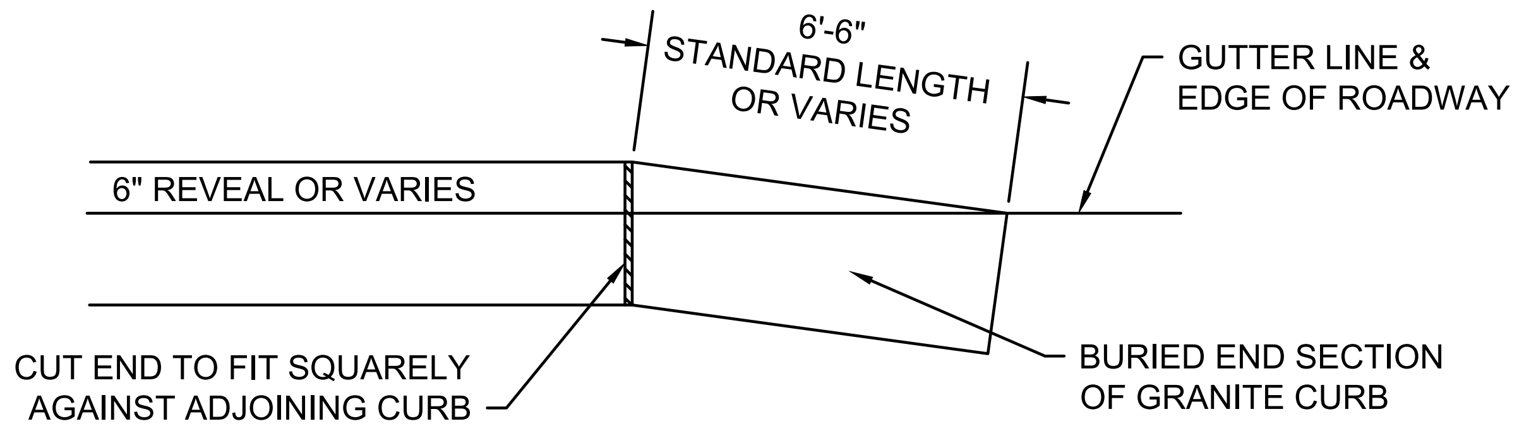
* TOLERANCE FOR CONSTRUCTION ±0.5%


TREATMENT VARIES SEE CONST PLAN
6.0' (TYP) SIDEWALK
TREATMENT VARIES SEE CONST PLAN
GRAN CURB TYPE VA-4
6" REVEAL (TYP)
1.5%*
6" CEM CONC FOR CURB SUPPORT
6" (TYP)
SEE CONSTRUCTION PLAN AND PAVEMENT NOTES FOR SIDEWALK TYPE

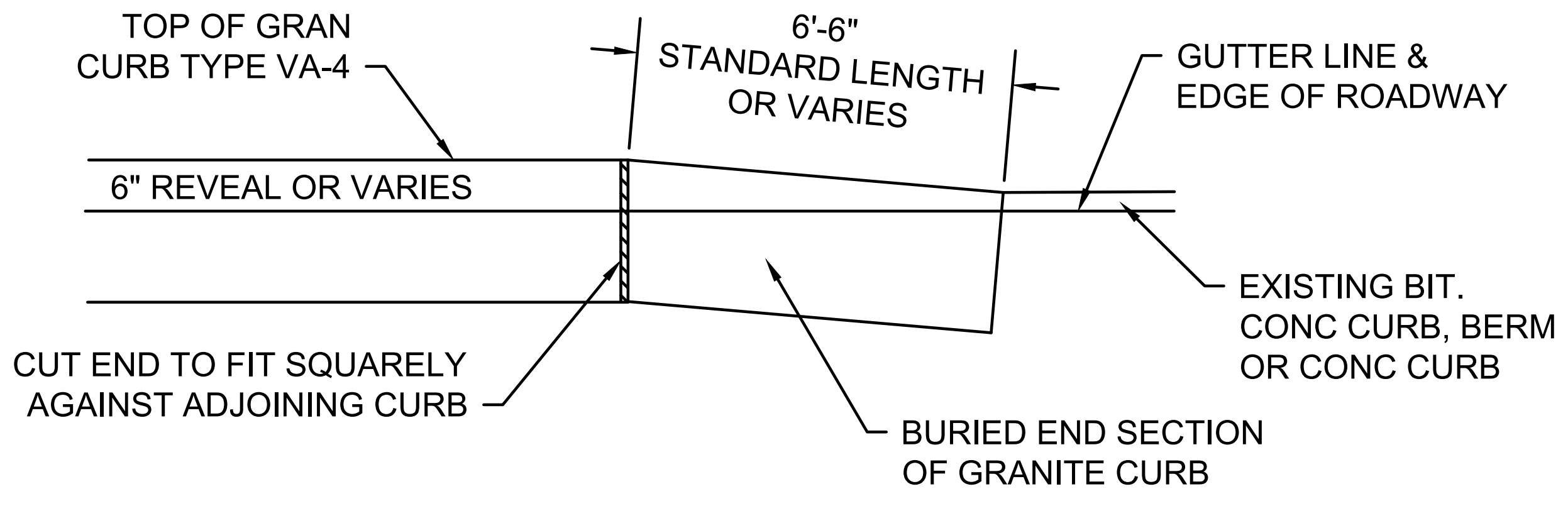
DETAIL FOR SIDEWALK WITH GRANITE CURB
NOT TO SCALE


TREATMENT VARIES (SEE PLAN)
VARIES (5.5' MIN.) SIDEWALK
4" LOAM AND SEED
6"
REVEAL VARIES
6"
GRAN CURB
*1.5%
VARIES
GRAN CURB TYPE VB OR VA-2
6" CEM CONC SUPPORT FOR VERTICAL GRAN CURB
6"
BRICK AND/OR 4" CEM CONC
6"
8" GRAVEL BORROW TYPE b
(TYP)
6" CEM CONC FOR CURB SUPPORT
SEE PAVEMENT NOTES

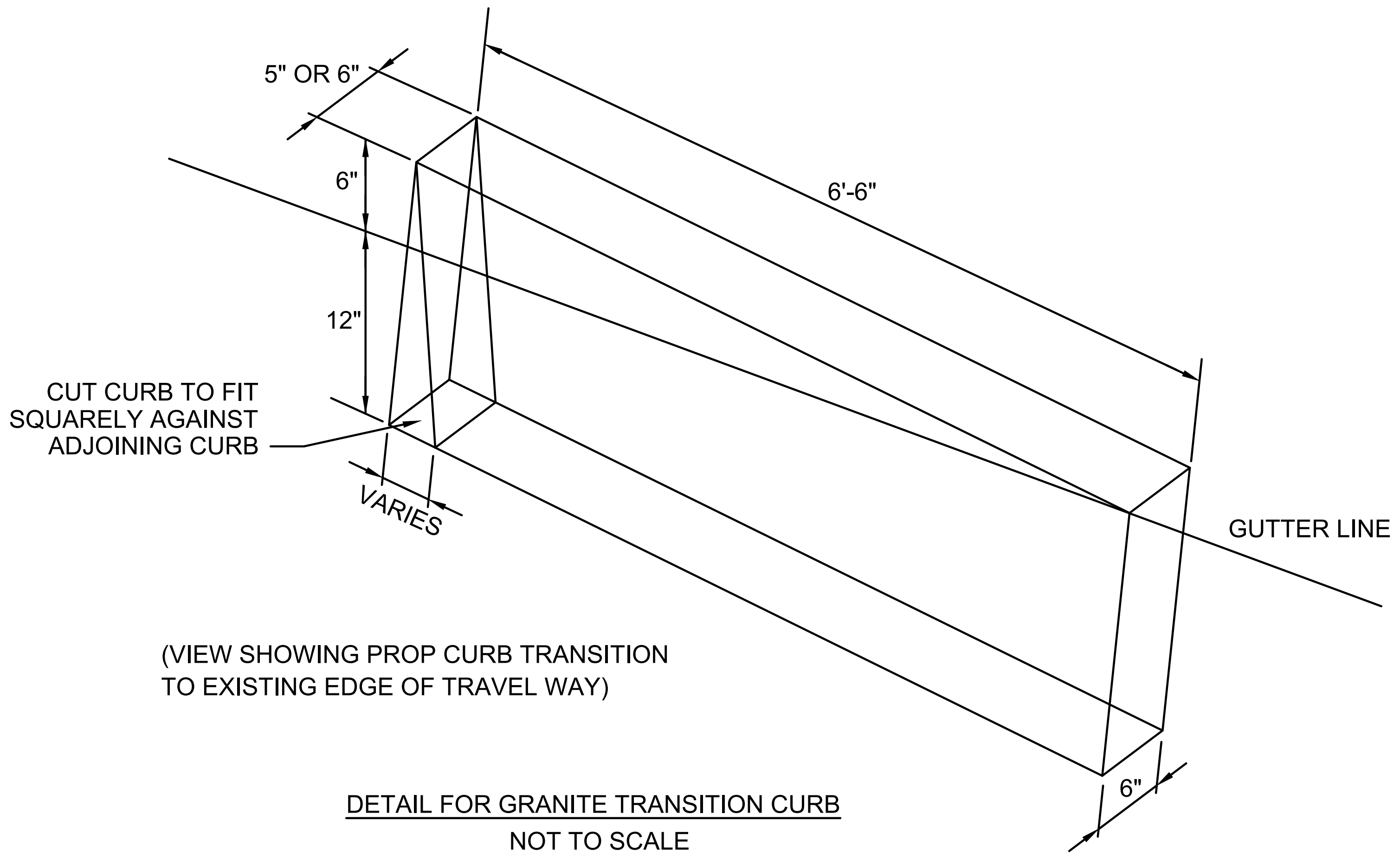
DETAIL FOR GRANITE CURB AT BACK OF SIDEWALK
NOT TO SCALE


6'-6" STANDARD LENGTH OR VARIES
GUTTER LINE & EDGE OF ROADWAY
6" REVEAL OR VARIES
CUT END TO FIT SQUARELY AGAINST ADJOINING CURB
BURIED END SECTION OF GRANITE CURB

DETAIL FOR TRANSITION CURB
PROP CURB TO EXISTING EDGE OF TRAVEL WAY
NOT TO SCALE


TOP OF GRAN CURB TYPE VA-4
6'-6" STANDARD LENGTH OR VARIES
GUTTER LINE & EDGE OF ROADWAY
6" REVEAL OR VARIES
EXISTING BIT. CONC CURB, BERM OR CONC CURB
CUT END TO FIT SQUARELY AGAINST ADJOINING CURB
BURIED END SECTION OF GRANITE CURB

DETAIL FOR TRANSITION CURB
TRANSITION CURB - PROP CURB TO EXISTING CURB
NOT TO SCALE



(VIEW SHOWING PROP CURB TRANSITION TO EXISTING EDGE OF TRAVEL WAY)

DETAIL FOR GRANITE TRANSITION CURB
NOT TO SCALE

TABLE I	
PROFILE GRADE	HIGH SIDE TRANSITION LENGTH FOR 7.5% DESIGN SLOPE
%	(FEET)
0	6'-6"
>0-1	7'-8"
>1-2	9'-0"
>2-3	11'-0"
>3-4	14'-0"
>4	15'-0" MAX.

DRIVEWAY AND WHEELCHAIR RAMP HIGH SIDE TRANSITION LENGTHS

FIGURES ARE BASED ON A DESIGN SLOPE OF 7.5% AND A REVEAL OF 6".

NUMBER	DATE	MADE BY	CHECKED BY	REVISIONS

DRAWN BY: DW
DESIGNED BY: KY
CHECKED BY: DJ

REGISTERED PROFESSIONAL
KIEN Y. HO
CIVIL ENGINEER
No. 46[illegible]31
Kieny Ho
2/8/21

PREPARED BY
BETA
www.BETA-Inc.com

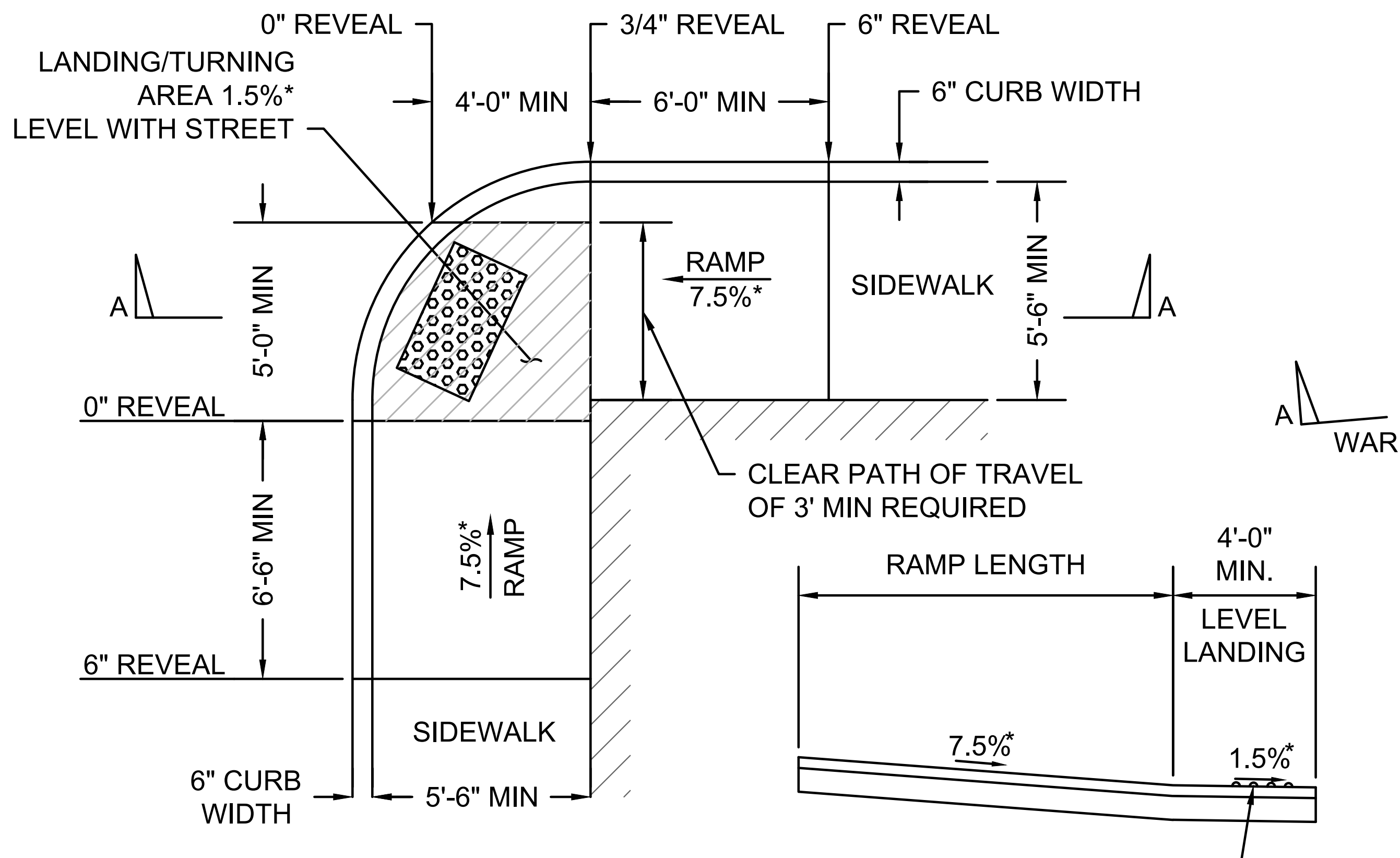
SUBCONSULTANT

SCALE
NONE
UNLESS OTHERWISE NOTED OR CHANGED BY REPRODUCTION

TITLE
TOWN CENTER IMPROVEMENTS
CONSTRUCTION DETAILS
LEXINGTON, MASSACHUSETTS

BETA JOB NO. 6331
ISSUE DATE 02/05/2021
SHEET NO. 9 OF 92

2/8/2021 12:04 PM O:\6300S\6331 - LEXINGTON CENTER STREETSCAPE\DRAWING FILES\PLANSET\6331 DETAILS.DWG (BETA STB BW.STB)

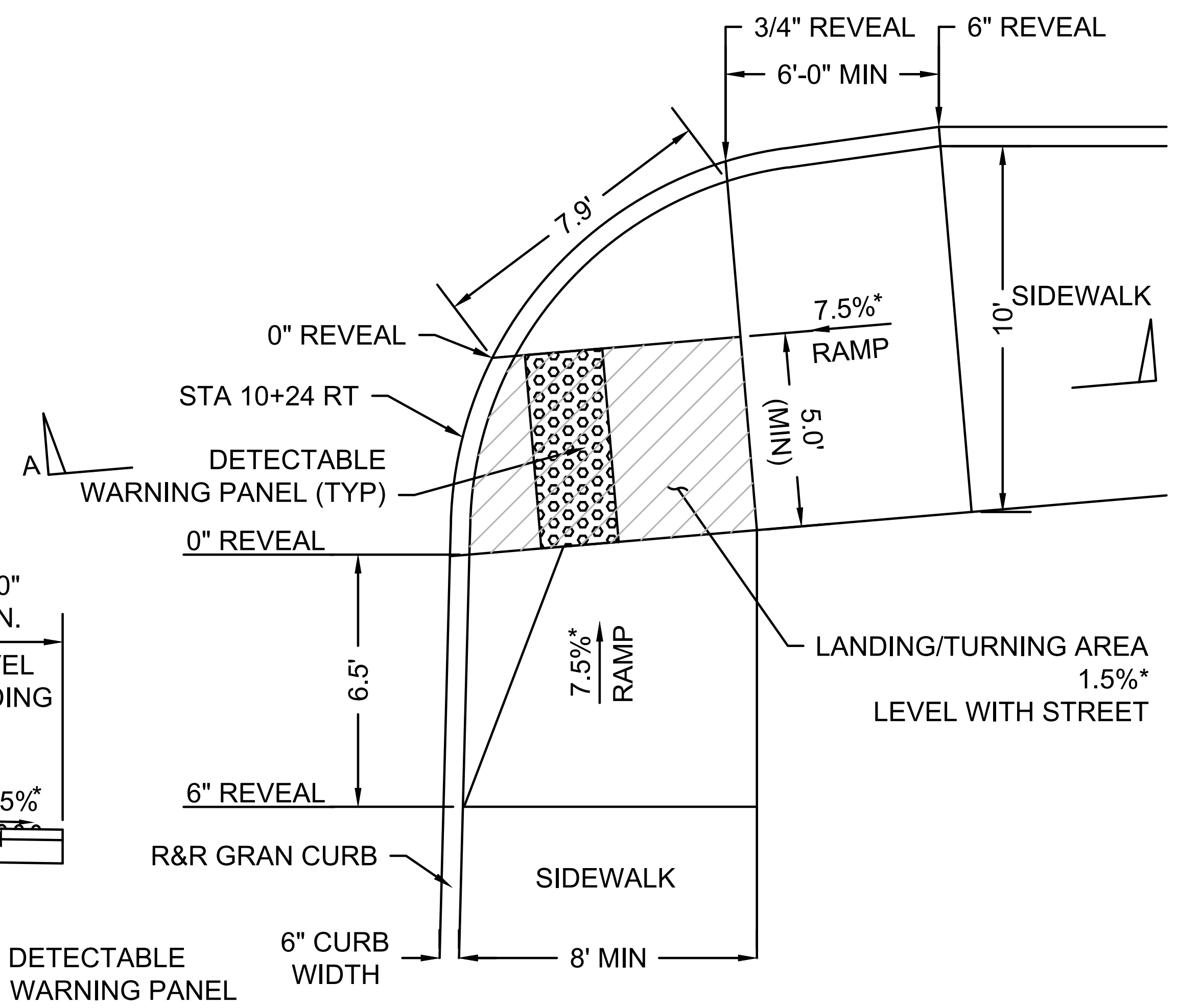


WHEELCHAIR RAMP DETAIL TYPE "A"

NOT TO SCALE

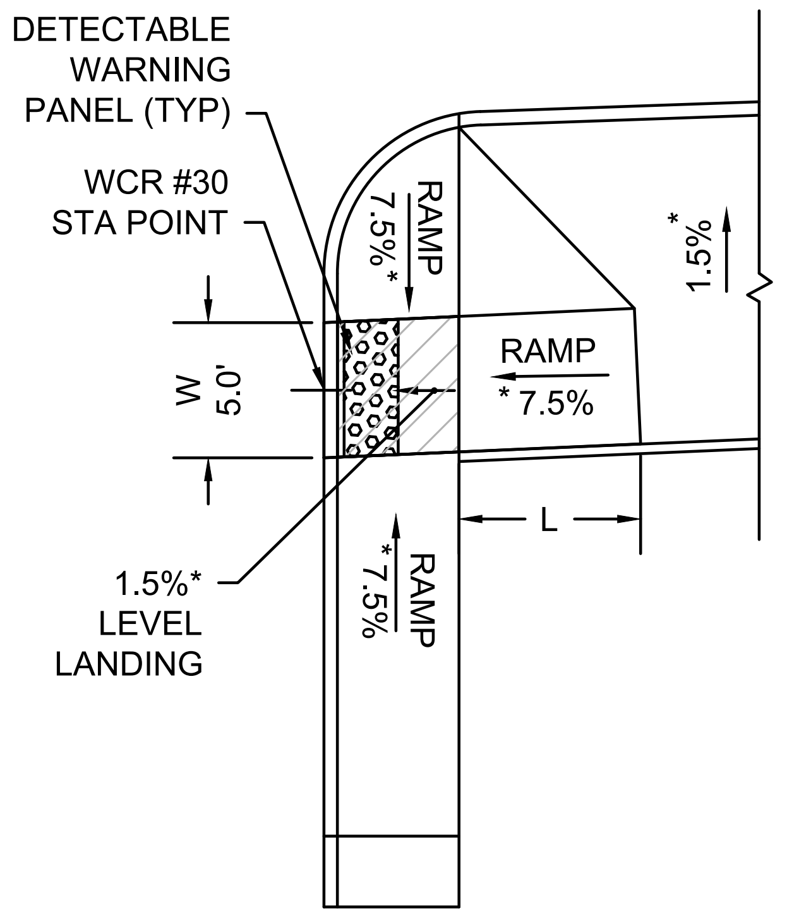
SECTION A-A

NOT TO SCALE



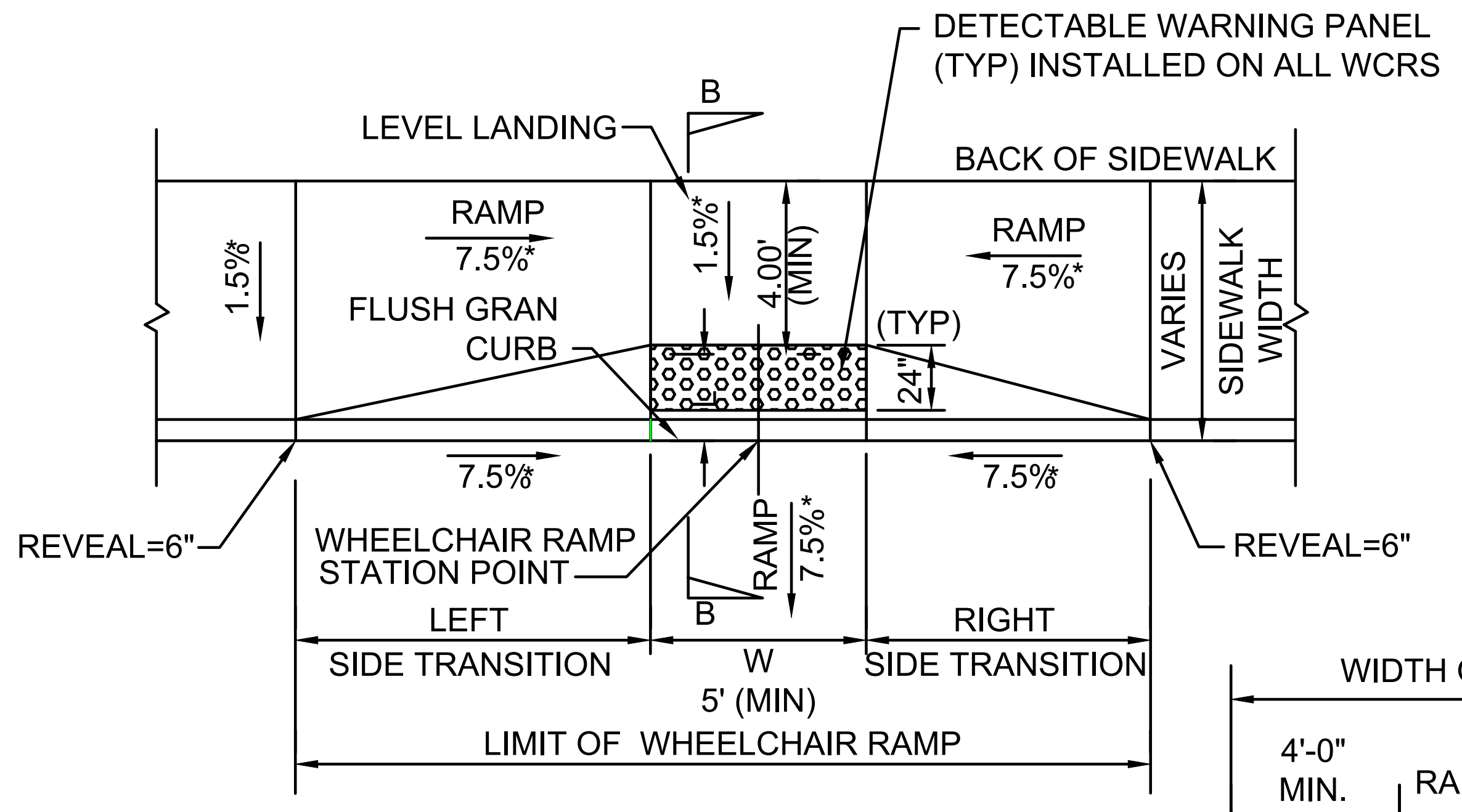
WHEELCHAIR RAMP #35

NOT TO SCALE



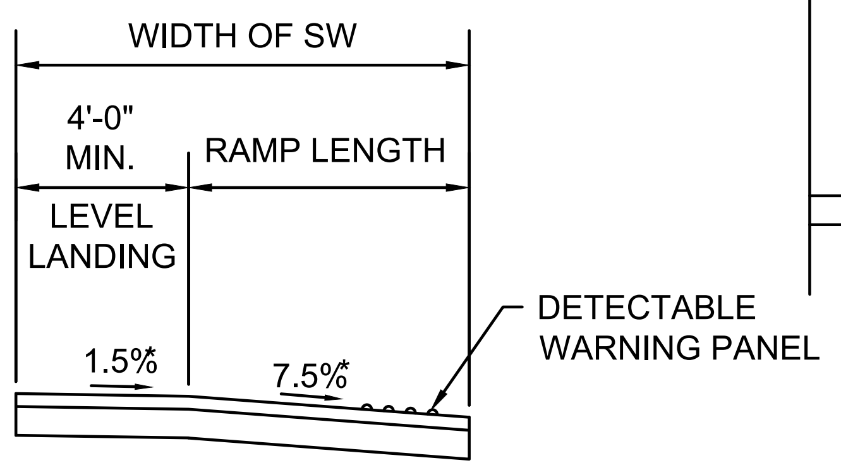
WHEELCHAIR RAMP #30

NOT TO SCALE



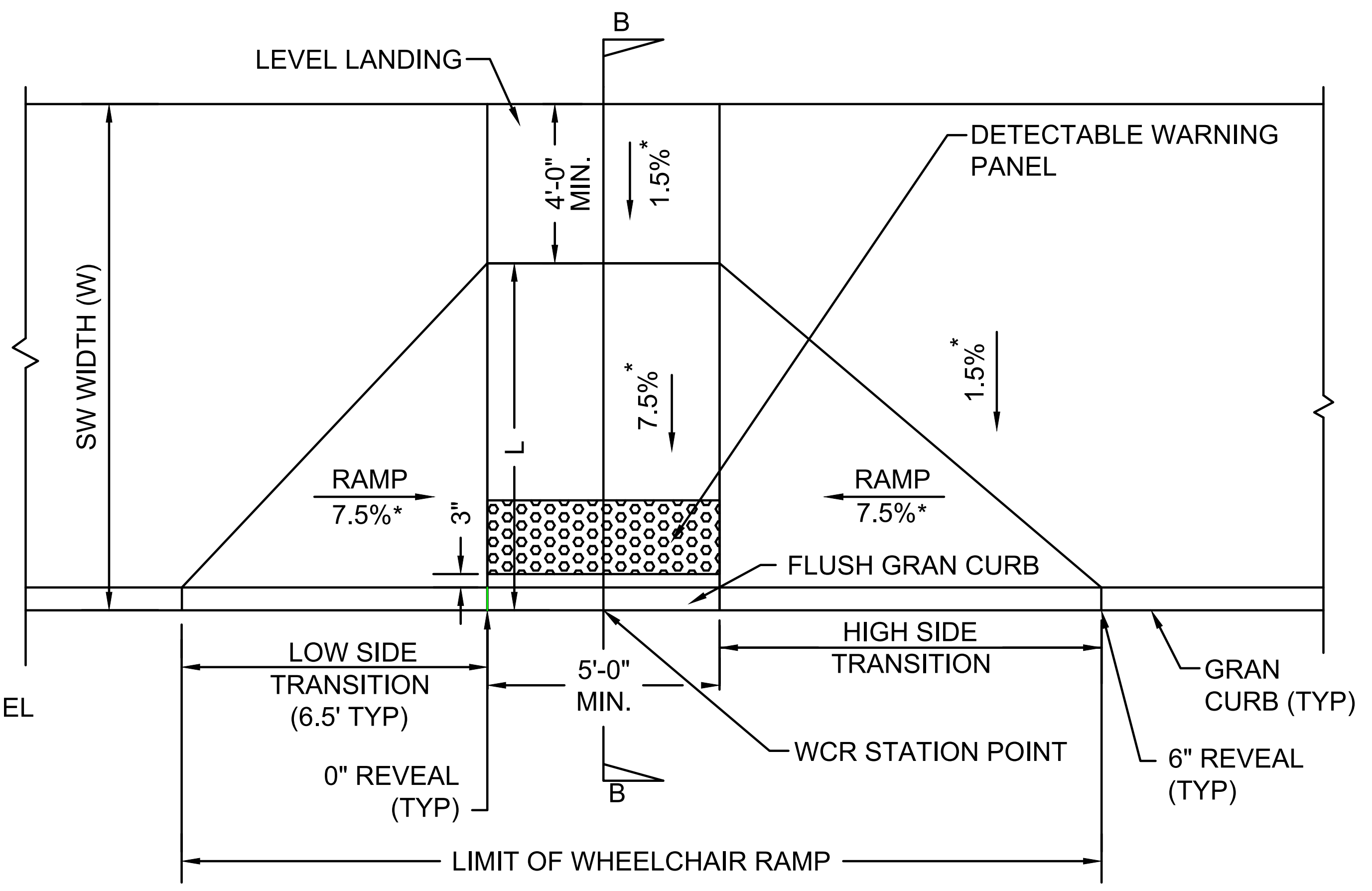
WHEELCHAIR RAMP DETAIL TYPE "B"

NOT TO SCALE



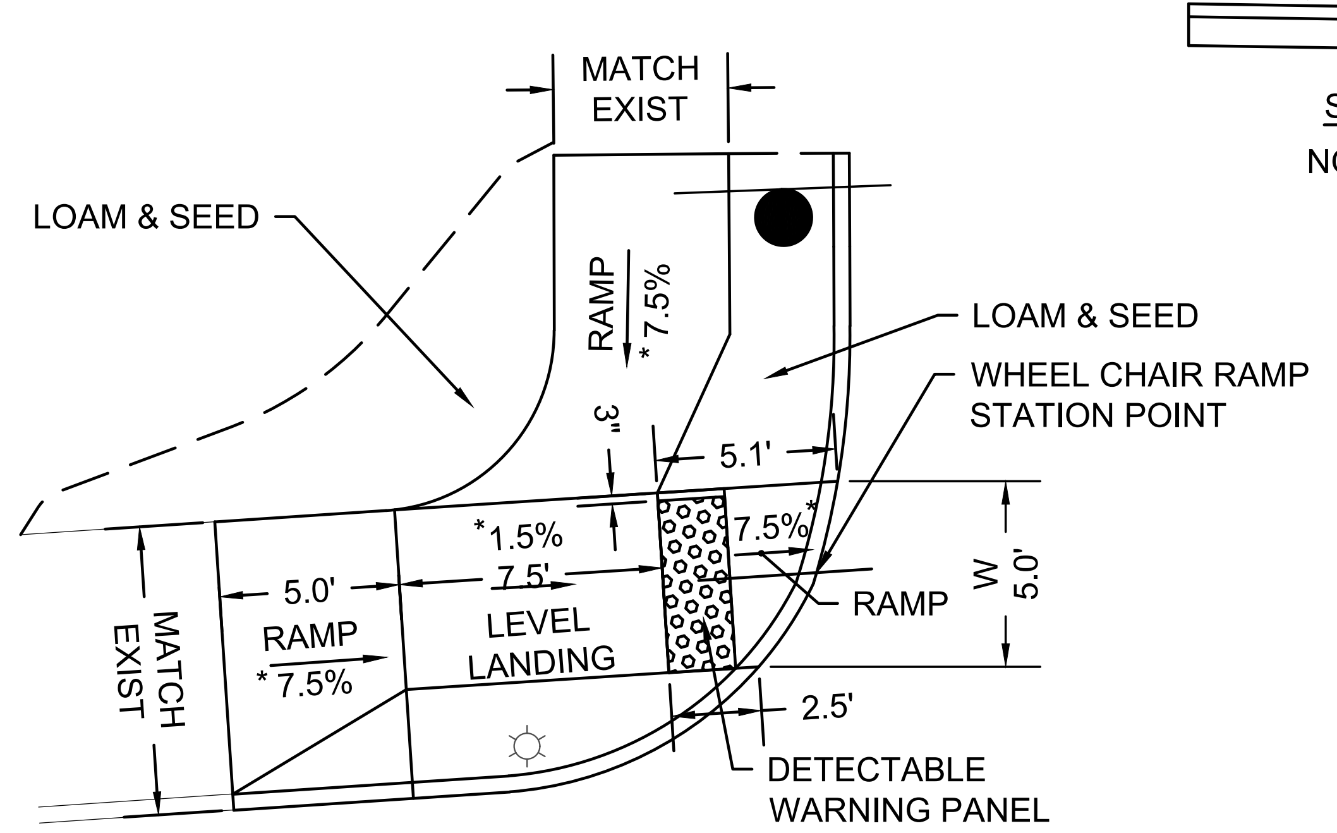
SECTION B-B

NOT TO SCALE



WHEELCHAIR RAMP DETAIL TYPE "C"

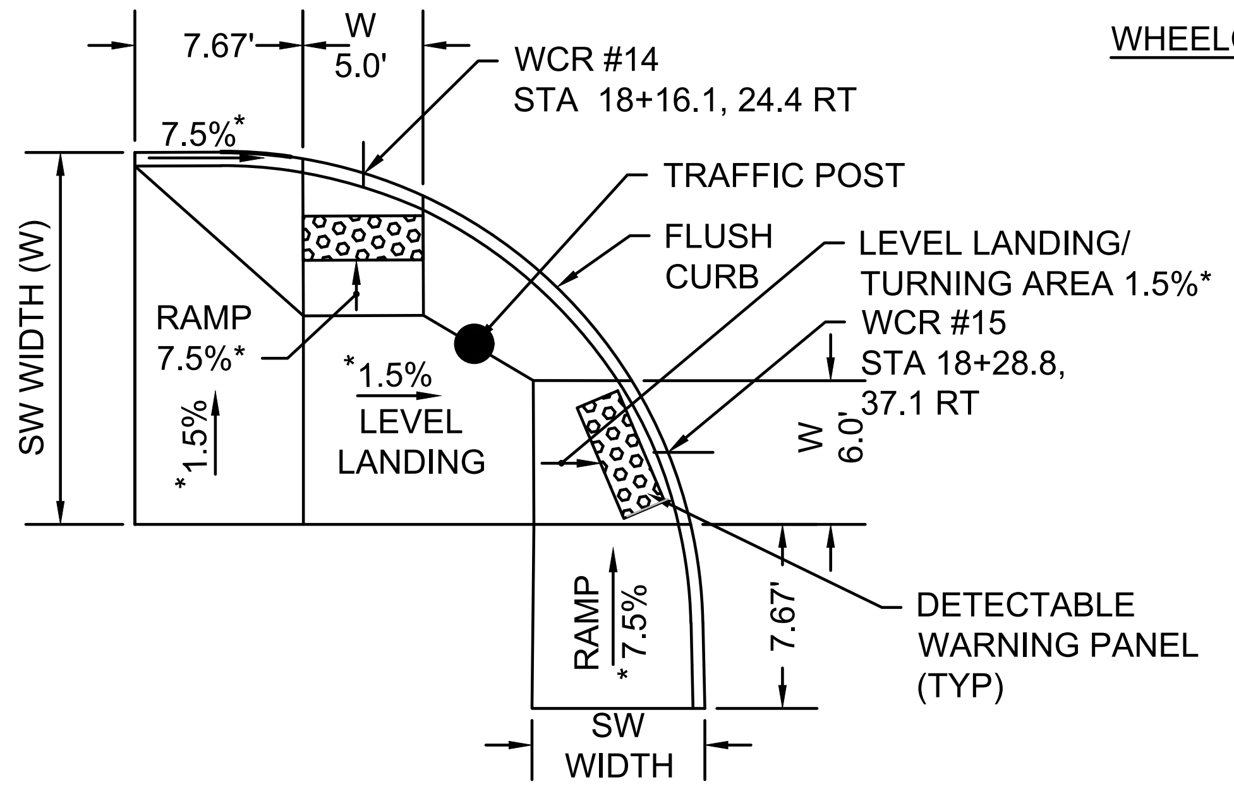
NOT TO SCALE



WHEELCHAIR RAMP DETAIL TYPE "D"

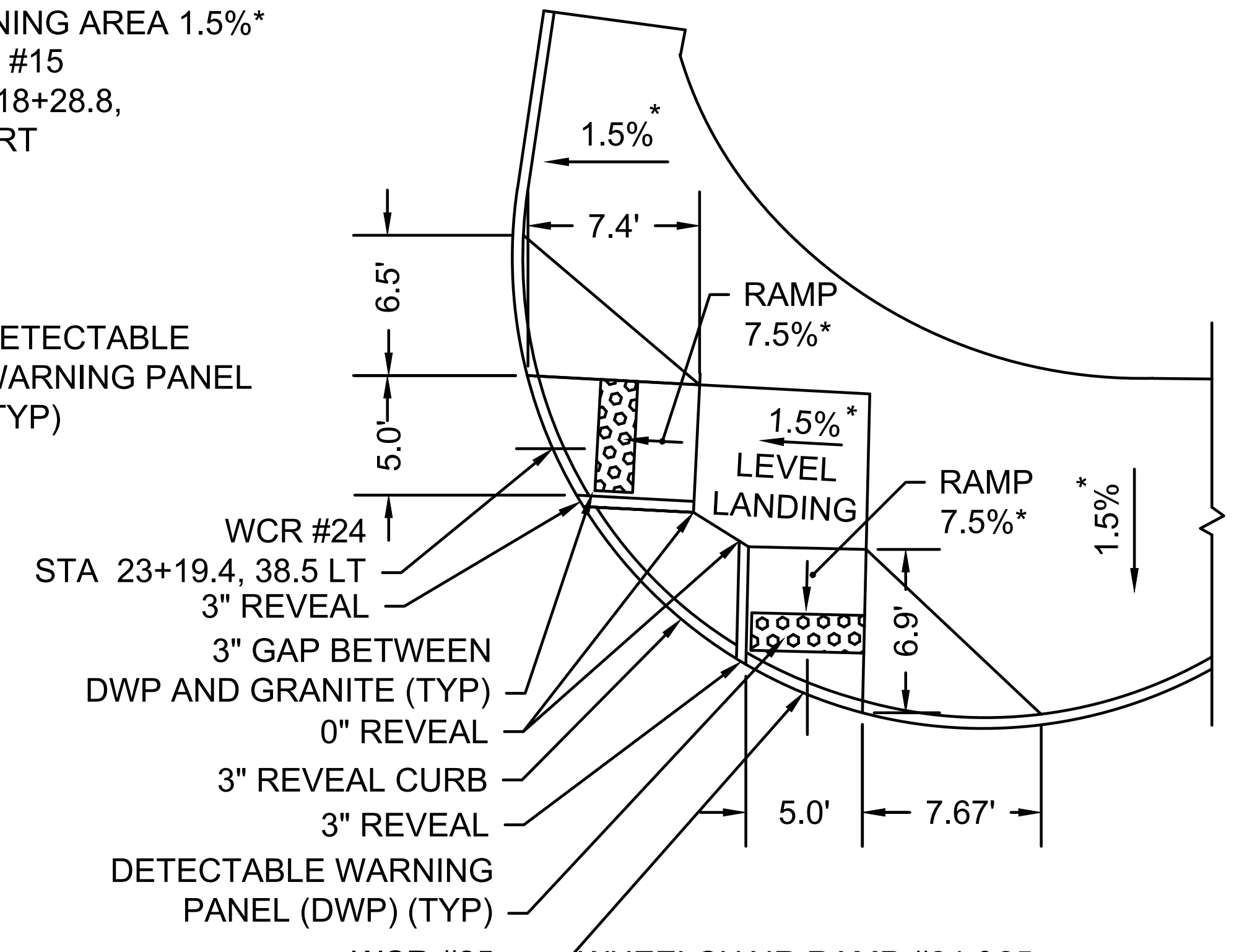
NOT TO SCALE

WHEEL CHAIR RAMP TYPE D DATA								
WCR NO.	LOCATION	RAMP REFERENCE POINT		GUTTER SLOPE AT RAMP OPENING	WIDTH OF RAMP OPENING W	TRANSITION LENGTH		SIDEWALK WIDTH
		STATION	OFFSET			LEFT	RIGHT	
1	MERIAM STREET	40+41.5	14.6' LT	2.0%	5.0'	15.6'	6.5'	8.0'



WHEELCHAIR RAMP #14 & #15

NOT TO SCALE



WHEELCHAIR RAMP #24 &25

NOT TO SCALE

WHEEL CHAIR RAMP TYPE A DATA								
WCR NO.	LOCATION	RAMP REFERENCE POINT		GUTTER SLOPE AT RAMP OPENING	LENGTH OF PRIMARY RAMP L	WIDTH OF RAMP OPENING W	TRANSITION LENGTH		SIDEWALK WIDTH
		STATION	OFFSET				LEFT	RIGHT	
9	MASSACHUSETTS AVE	14+30.4	37.00' RT	2.5%	8.5'	6.4'	7.9'	7.7'	10.0'
30	MASSACHUSETTS AVE	25+31.6	35.3' RT	1.6%	5.0'	5.0'	10.2'	14.0'	12.4'

NOTE: SEE WHEELCHAIR RAMP #30 DETAIL

WHEEL CHAIR RAMP TYPE B DATA									
WCR NO.	LOCATION	RAMP REFERENCE POINT		GUTTER SLOPE AT RAMP OPENING	LENGTH OF PRIMARY RAMP L	WIDTH OF RAMP OPENING W	TRANSITION LENGTH		SIDEWALK WIDTH
		STATION	OFFSET				LEFT	RIGHT	
28	MASSACHUSETTS AVE	25+01.3	36.8' LT	0.4%	3.3'	5.0'	6.5'	9.0'	10.7'
31	MASSACHUSETTS AVE	26+44.2	27.3' LT	1.0%	4.3'	5.0'	6.0'	6.5'	11.0'
34	WALTHAM STREET	3+86.6	21.0' RT	2.5%	3.5'	5.0'	3.5' 3.0"R	6.5' 3.5"R	8.0'

WHEEL CHAIR RAMP TYPE C DATA									
WCR NO.	LOCATION	RAMP REFERENCE POINT		GUTTER SLOPE AT RAMP OPENING	LENGTH OF PRIMARY RAMP L	WIDTH OF RAMP OPENING W	TRANSITION LENGTH		SIDEWALK WIDTH
		STATION	OFFSET				LEFT	RIGHT	
2	MASSACHUSETTS AVE	11+56.8	40.9' LT	1.0%	8.5'-9.5'	5.0'	6.5'	7.7' 3.0"R	20.1'
3	MASSACHUSETTS AVE	11+74.2	25.1' LT	0.5%	8.5'-9.0'	5.0'	6.5' 3.0"R	10.3' 3.0"R	20.1'
4	MASSACHUSETTS AVE	13+22.5	39.3 LT	0.9%	9.0'-9.4'	5.0'	7.0' 3.0"R	7.1'	20.0'
5	MASSACHUSETTS AVE	13+44.5	38.3' LT	2.0%	8.4'-9.0'	5.0'	6.2' 5.0"R	5.0' 3.0"R	14.6'
6	MASSACHUSETTS AVE	13+59.2	24.0' LT	1.6%	8.9'	5.0'	5.1' 3.0"R	6.5' 4.0"R	14.6'
7	MASSACHUSETTS AVE	13+59.4	24.8' RT	0.8%	6.3'	5.0'	6.5' 4.0"R	7.5' 4.0"R	9.9'
8	MASSACHUSETTS AVE	14+02.5	36.1' RT	1.6%	5.0'	5.0'	7.7'	6.5' 4.0"R	9.9'
9 A	MASSACHUSETTS AVE	15+08.8	38.4' LT	0.6%	9.4'	5.0'	9.0'	6.5'	14.4'
10	MASSACHUSETTS AVE	15+31.3	38.4' LT	2.0%	5.0'-6.4'	5.0'	6.5'	7.7'	26.3'
11	MASSACHUSETTS AVE	15+63.1	24.3' LT	0.8%	8.4'	5.0'	4.3' 4.0"R	4.3' 5.0"R	26.3'
12	MASSACHUSETTS AVE	15+66.2	24.8' RT	1.0%	6.7'	5.0'	6.5' 4.0"R	6.5' 4.0"R	10.0'
13	MASSACHUSETTS AVE	18+16.1	24.5' LT	0.4%	8.4'	5.0'	6.5'	6.5' 5.0"R	35.5'
16	MASSACHUSETTS AVE	18+73.1	38.7' RT	1.5%	5.5'-7.3'	6.0'	4.3'	8.0' 3.0"R	9.9'
17	MASSACHUSETTS AVE	18+87.6	25.0' RT	1.4%	8.0'-9.1'	5.0'	6.5'	6.0'	9.6'
18	MASSACHUSETTS AVE	18+87.4	24.5' LT	1.2%	6.0'	5.0'	6.4' 5.0"R	6.5' 5.0"R	35.5'
19	MASSACHUSETTS AVE	20+80.9	24.5' RT	2.2%	8.0'	5.0'	6.6'	6.5'	11.0'
20	MASSACHUSETTS AVE	20+80.8	23.1' LT	1.2%	7.9'	5.0'	6.0'	6.0'	27.2'
21	MASSACHUSETTS AVE	21+02.5	45.8' LT	2.0%	5.0'	5.0'	9.0'	6.5'	27.2'
22	MASSACHUSETTS AVE	21+30.3	43.1' LT	1.6%	7.1'	5.0'	9.0'	6.6'	16.3'
23	MASSACHUSETTS AVE	22+88.5	40.9' LT	2.0%	7.7'	5.0'	10.0'	6.5'	14.7'
26	MASSACHUSETTS AVE	23+30.8	23.5' RT	0.8%	8.5'	5.0'	6.5' 7.0"R	9.2' 5.6"R	14.1'
27	MASSACHUSETTS AVE	24+81.2	38.8' LT	1.6%	4.5'	5.0'	5.3'	2.8'	11.0'
29	MASSACHUSETTS AVE	25+12.8	37.3' RT	1.4%	4.0'	5.0'	7.7'	4.5'	28.4'
32	MASSACHUSETTS AVE	26+43.8	18.5' RT	1.1%	8.8'	5.0'	7.7'	6.5'	18.6'
33	WALTHAM STREET	3+86.9	15.4 L	2.1%	5.0'	5.0'	15.0' 3.5"R	6.5' 5.3"R	13.0'
36	MASSACHUSETTS AVE	11+74.3	25.1' RT	1.6%	7.0'	5.0'	6.5'	6.5'	10.5'

2/8/2021 12:04 PM O:\6300S\6331 - LEXINGTON CENTER STREETSCAPE\DRAWING FILES\PLANSET\6331 DETAILS.DWG (BETA STB BW.STB)

NUMBER	DATE	MADE BY	CHECKED BY	REVISIONS

DRAWN BY: DW

DESIGNED BY: KY

CHECKED BY: DJ

REGISTERED PROFESSIONAL

KIEN Y. HO
CIVIL ENGINEER

Kieny Ho
2/8/21

PREPARED BY

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SUBCONSULTANT

SCALE
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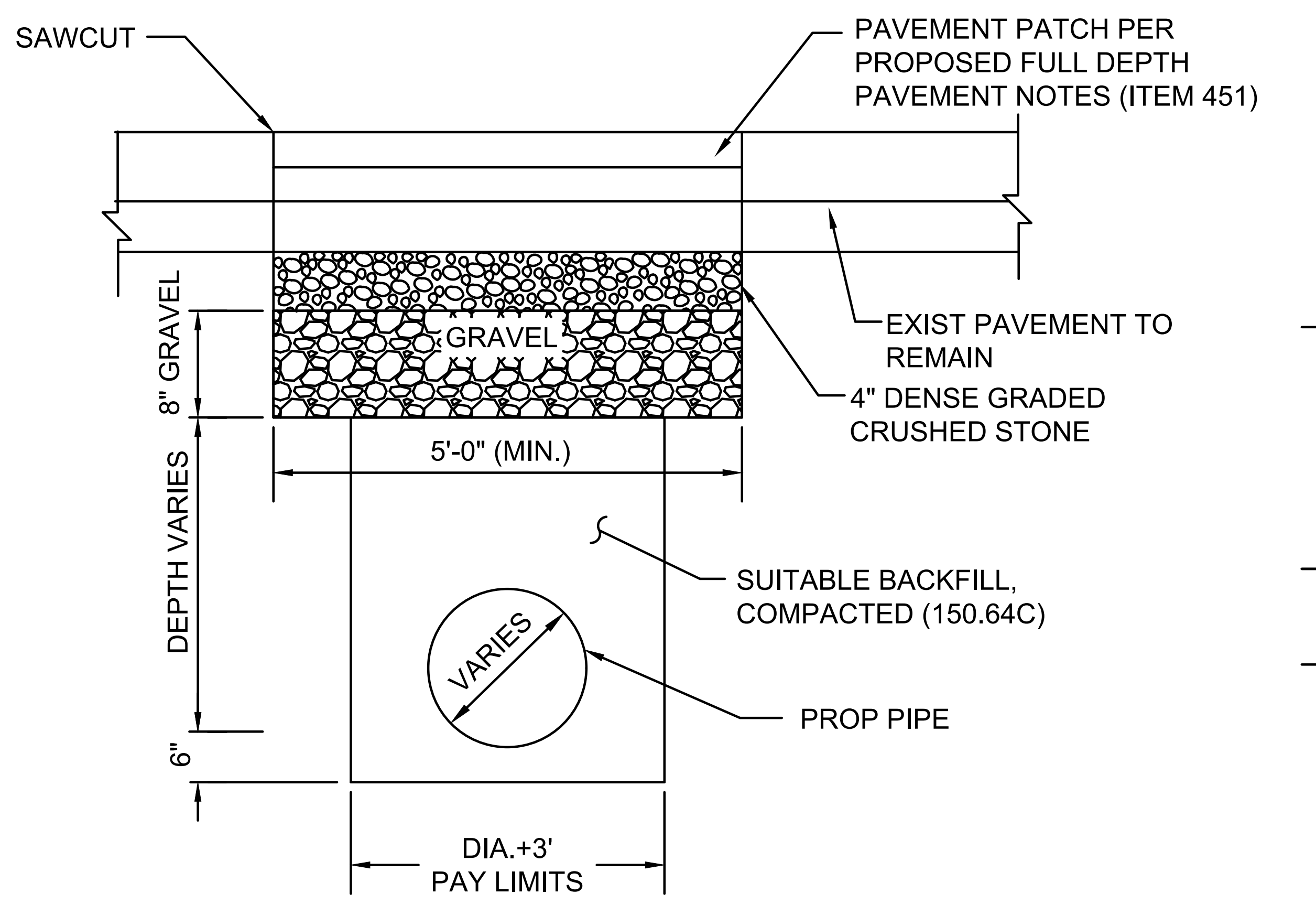
TITLE

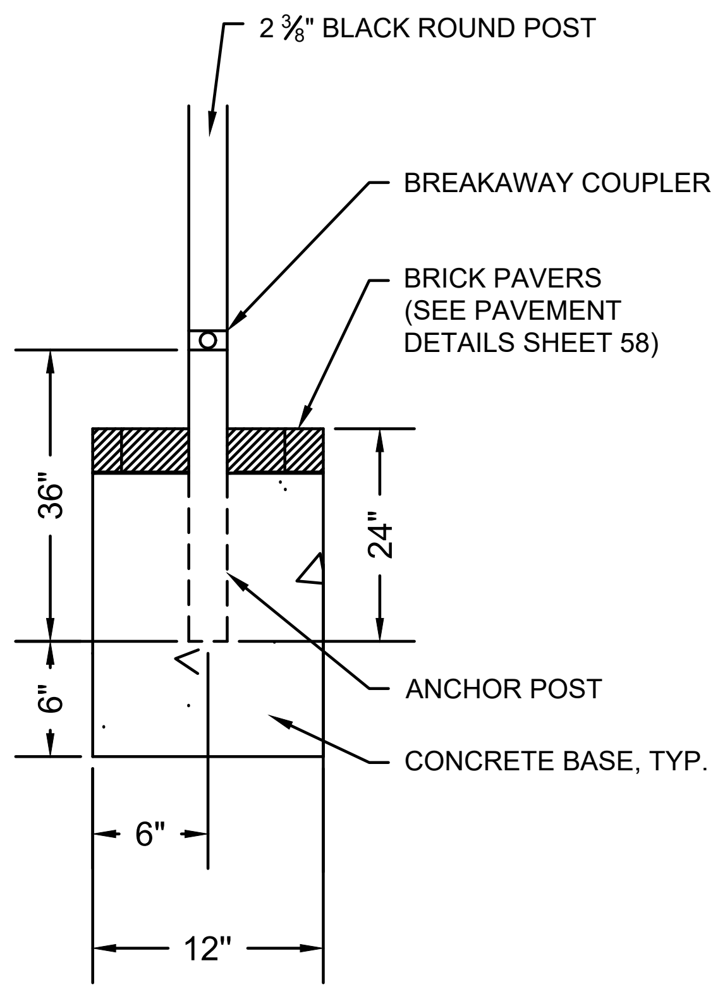
TOWN CENTER IMPROVEMENTS
CONSTRUCTION DETAILS
LEXINGTON, MASSACHUSETTS

BETA JOB NO. 6331
ISSUE DATE 02/05/2021
SHEET NO. 10 OF 92

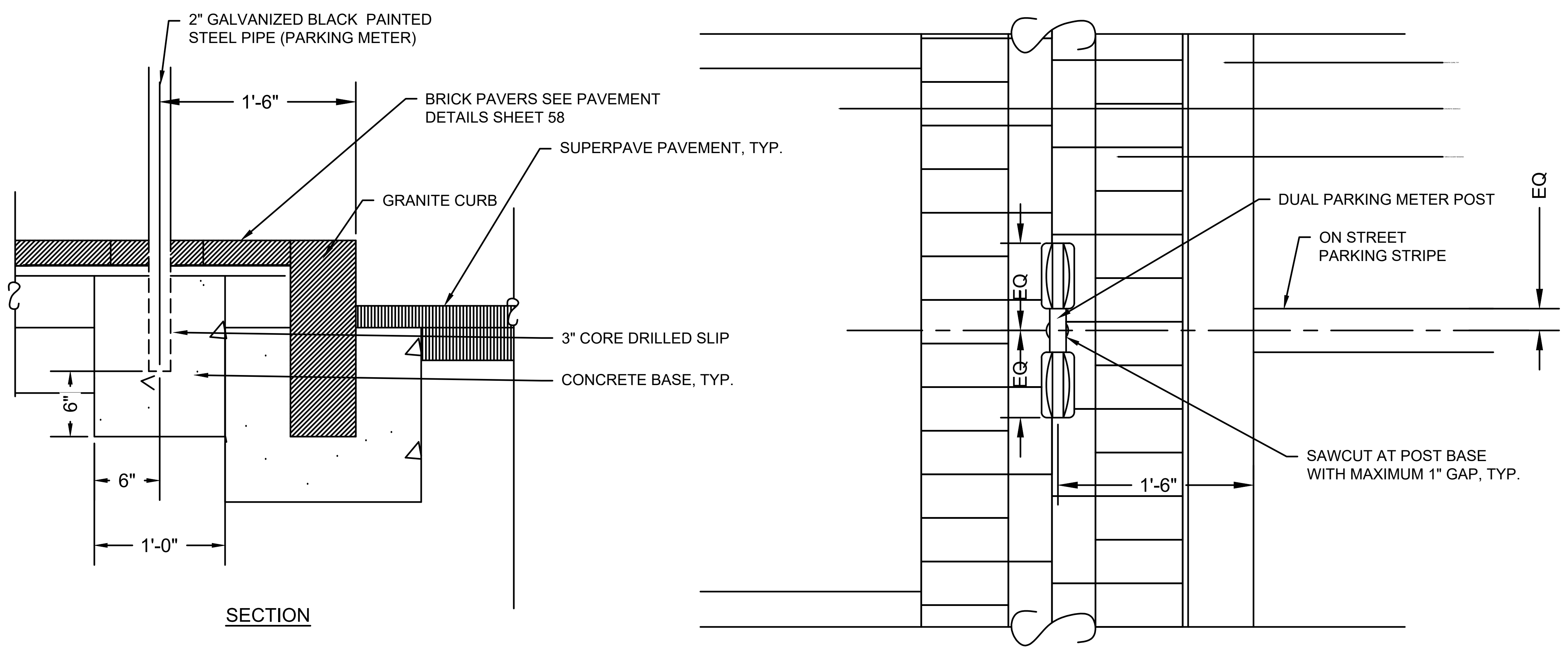

SAWCUT
PAVEMENT PATCH PER PROPOSED FULL DEPTH PAVEMENT NOTES (ITEM 451)
GRAVEL
8" GRAVEL
EXIST PAVEMENT TO REMAIN
4" DENSE GRADED CRUSHED STONE
5'-0" (MIN.)
DEPTH VARIES
SUITABLE BACKFILL, COMPACTED (150.64C)
VARIES
PROP PIPE
6"
DIA.+3' PAY LIMITS

PERMANENT TRENCH PATCH DETAIL IN MILLED AREAS

NOT TO SCALE



BREAKAWAY SIGN POST DETAIL



SECTION

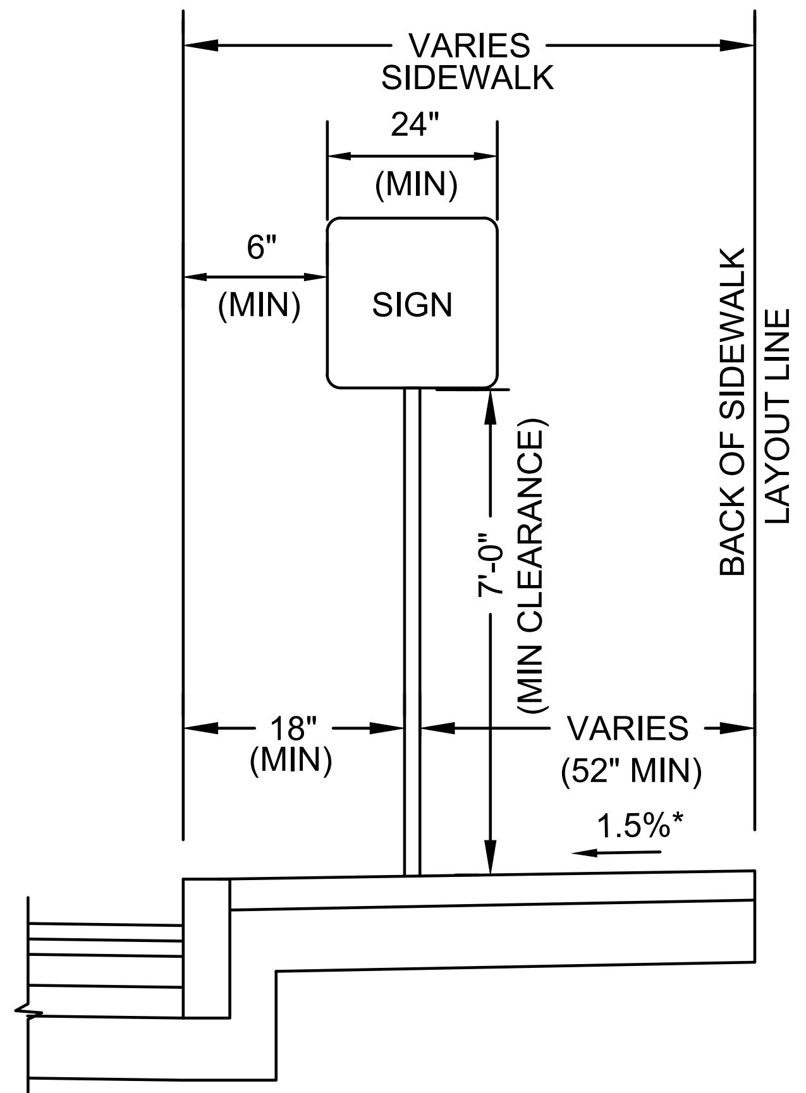
PLAN

PARKING METER POST DETAIL

NOT TO SCALE

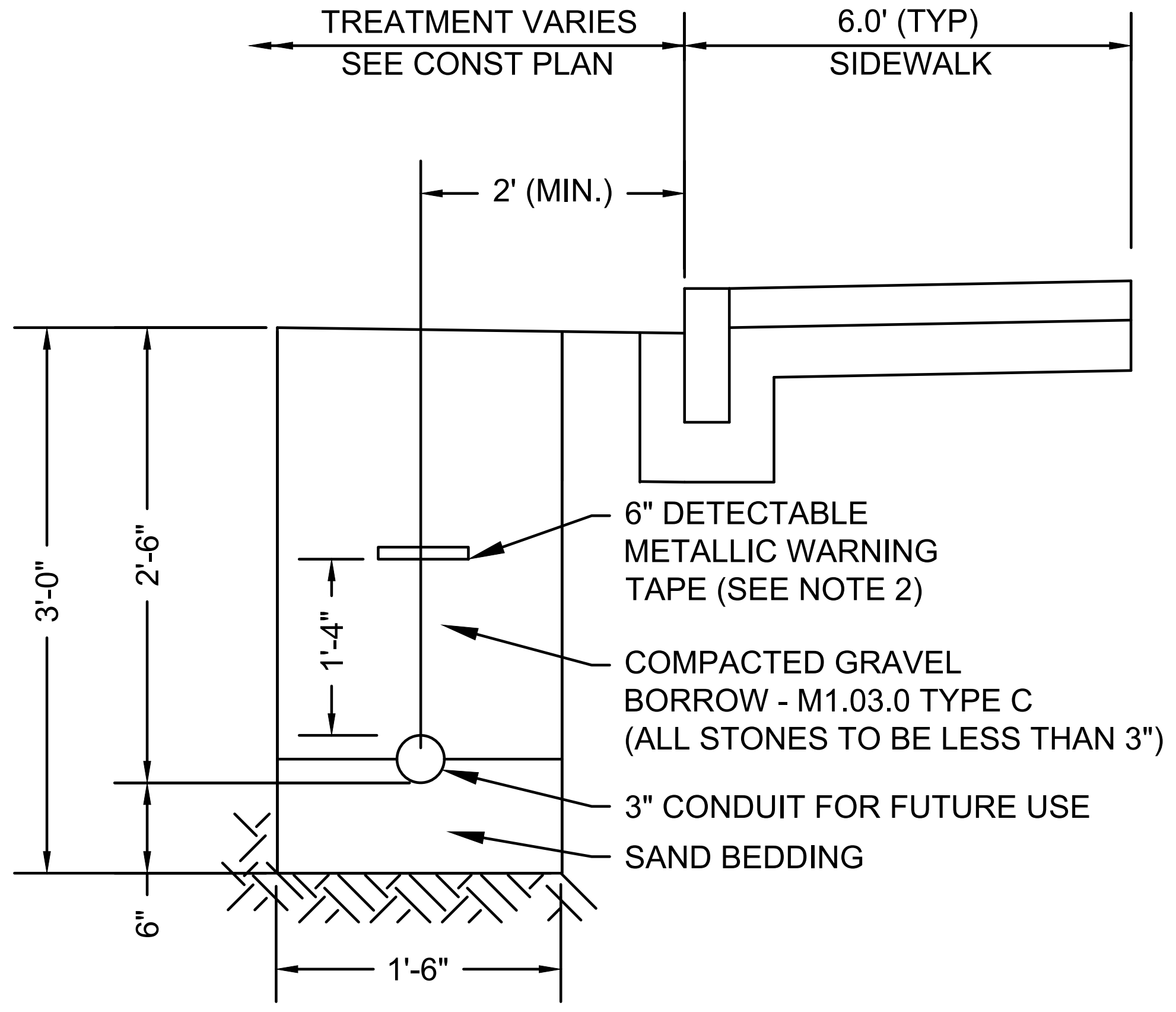
NOTE:

1. SINGLE PARKING METERS SHOULD FOLLOW THE SAME DIMENSIONS OF DUAL PARKING METERS
2. SEE ENGINEER'S PLANS FOR METERS MOUNTED TO LIGHT POLES
3. METERS SHALL BE PROVIDED BY THE TOWN.



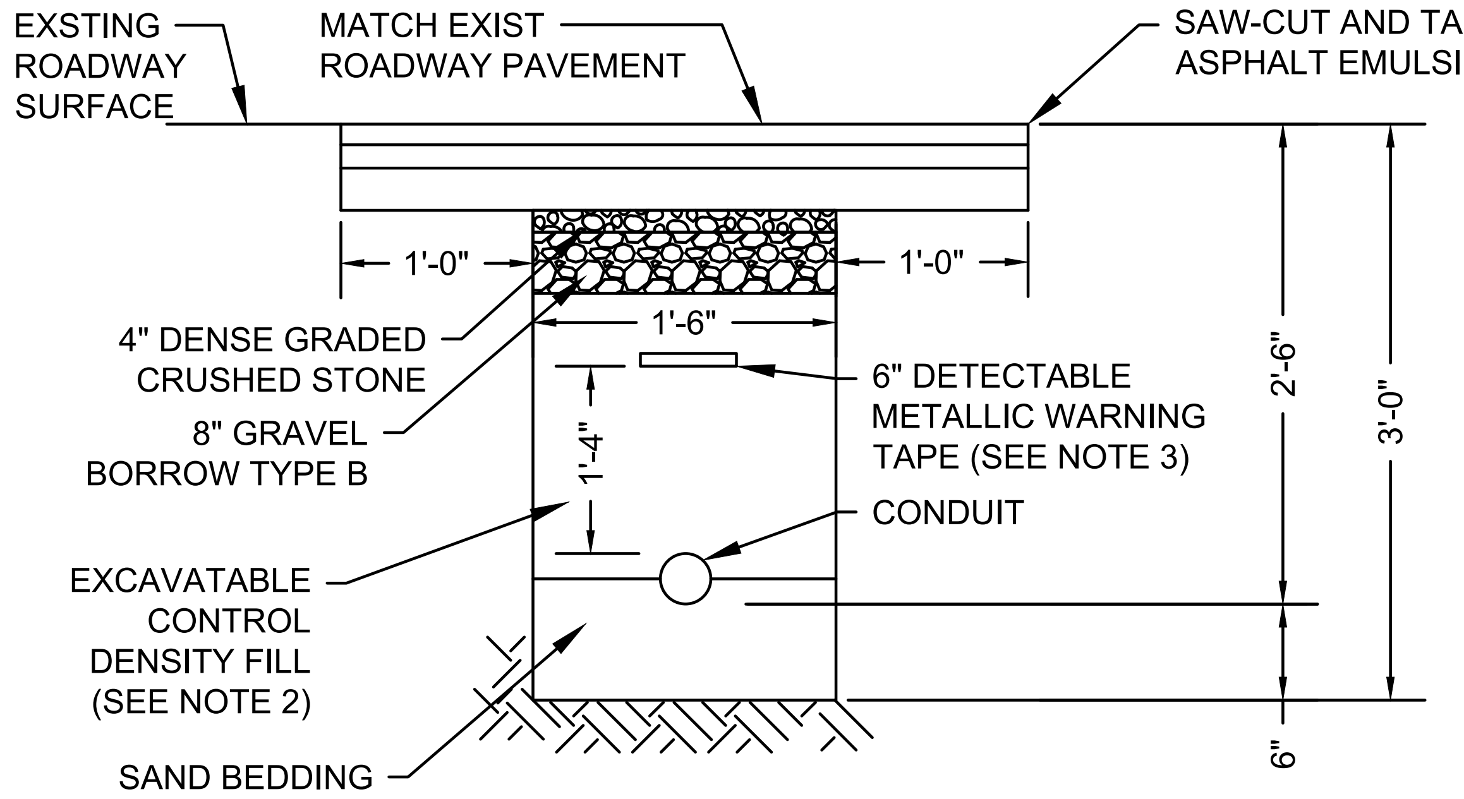
TRAFFIC SIGN

NOT TO SCALE


TREATMENT VARIES SEE CONST PLAN
6.0' (TYP) SIDEWALK
2' (MIN.)
3'-0"
2'-6"
1'-4"
6" DETECTABLE METALLIC WARNING TAPE (SEE NOTE 2)
COMPACTED GRAVEL BORROW - M1.03.0 TYPE C (ALL STONES TO BE LESS THAN 3")
3" CONDUIT FOR FUTURE USE
SAND BEDDING
6"
1'-6"

FUTURE CONDUIT LOCATION

NOT TO SCALE

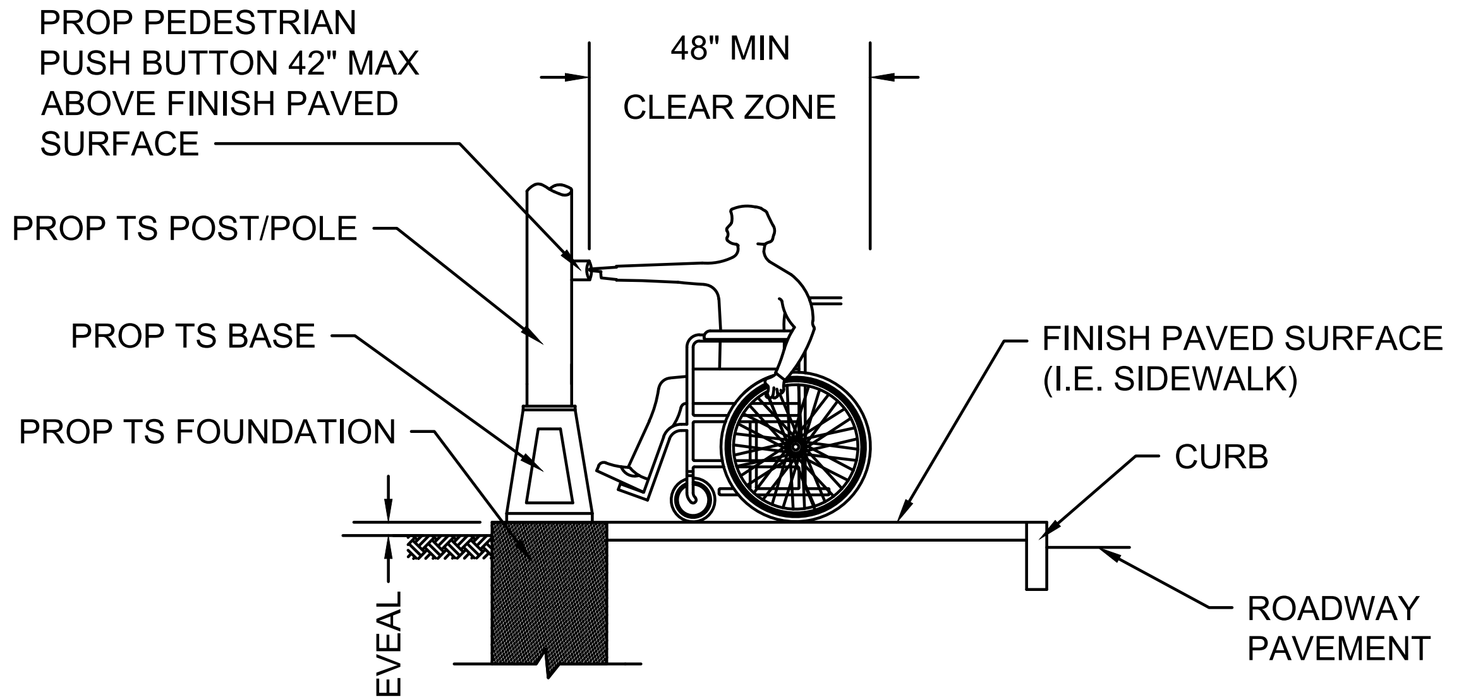

EXSTING ROADWAY SURFACE
MATCH EXIST ROADWAY PAVEMENT
SAW-CUT AND TACK W/RS-1 ASPHALT EMULSION (TYP)
1'-0"
1'-0"
4" DENSE GRADED CRUSHED STONE
1'-6"
8" GRAVEL BORROW TYPE B
6" DETECTABLE METALLIC WARNING TAPE (SEE NOTE 3)
1'-4"
CONDUIT
EXCAVATABLE CONTROL DENSITY FILL (SEE NOTE 2)
SAND BEDDING
2'-6"
3'-0"
6"

CONDUIT CROSSING ROADWAY

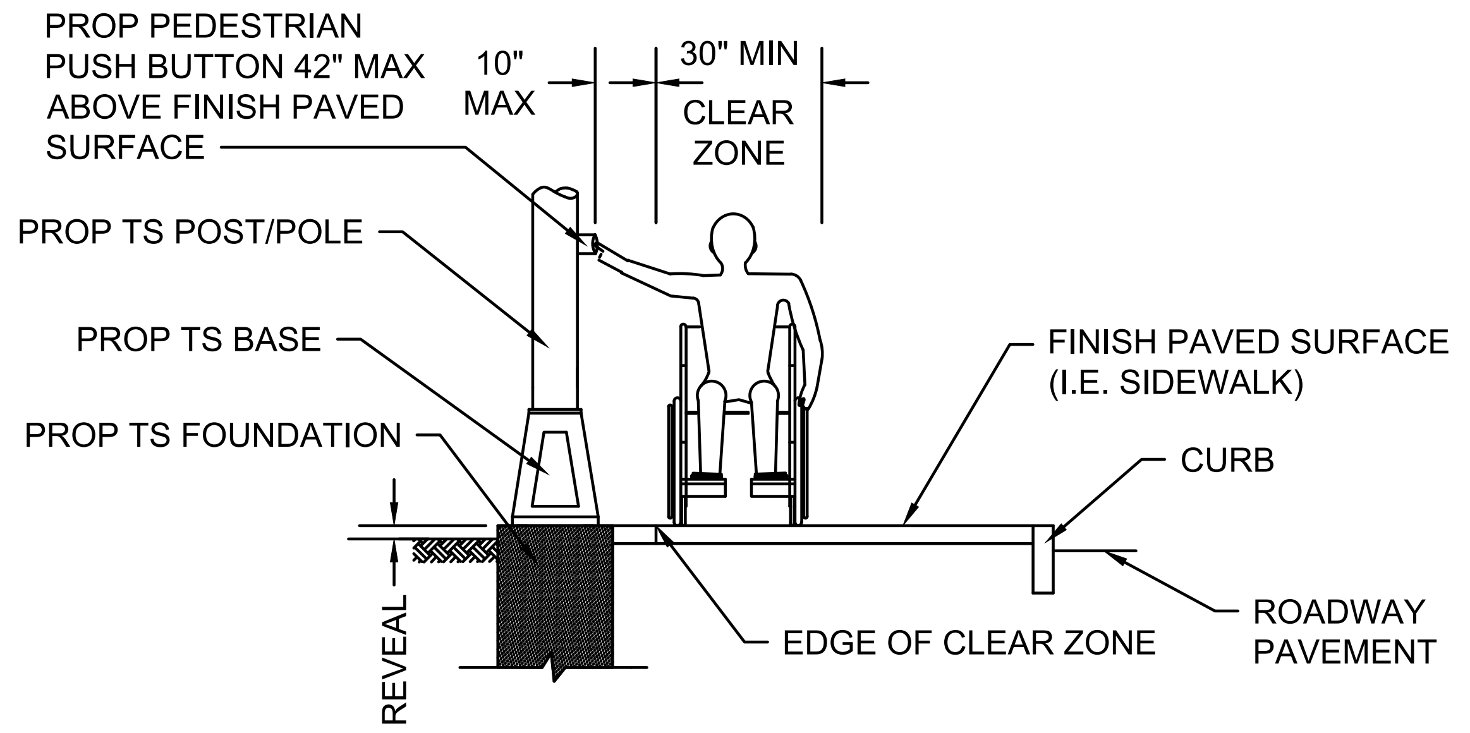
NOT TO SCALE

NOTES:

1. SCHEDULE 80 ELECTRICAL CONDUIT TYPE NM-PLASTIC (UL), WITH PULL ROPE UNLESS OTHERWISE APPROVED BY THE ENGINEER.
2. CONTROL DENSITY FILL SHALL MEET THE REQUIREMENTS OF SUBSECTION M4.08.0
3. WARNING TAPE SHALL BE PER CURRENT APWA STANDARDS.


PROP PEDESTRIAN PUSH BUTTON 42" MAX ABOVE FINISH PAVED SURFACE
48" MIN
CLEAR ZONE
PROP TS POST/POLE
PROP TS BASE
PROP TS FOUNDATION
FINISH PAVED SURFACE (I.E. SIDEWALK)
CURB
ROADWAY PAVEMENT
2" REVEAL

FORWARD APPROACH (FORWARD REACH)



PARALLEL APPROACH (SIDE REACH)

PEDESTRIAN PUSH BUTTON CLEAR ZONE

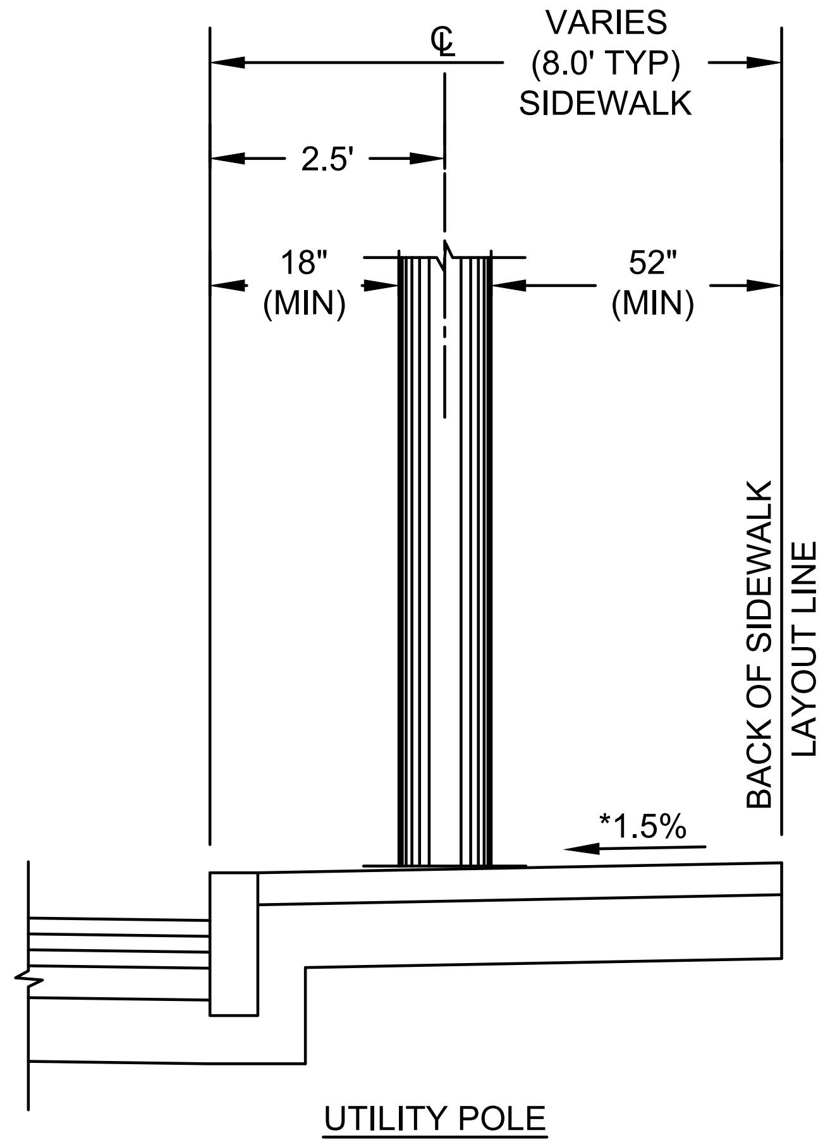
NOT TO SCALE

NOTE:

A CLEAR GROUND SPACE SHALL CONSIST OF A STABLE AND FIRM AREA, COMPLYING WITH 521 CMR 6.5 (FORWARD REACH) OR 521 CMR 6.6 (SIDE REACH) AND SHALL BE PROVIDED AT EACH OF THE PEDESTRIAN PUSH BUTTONS.

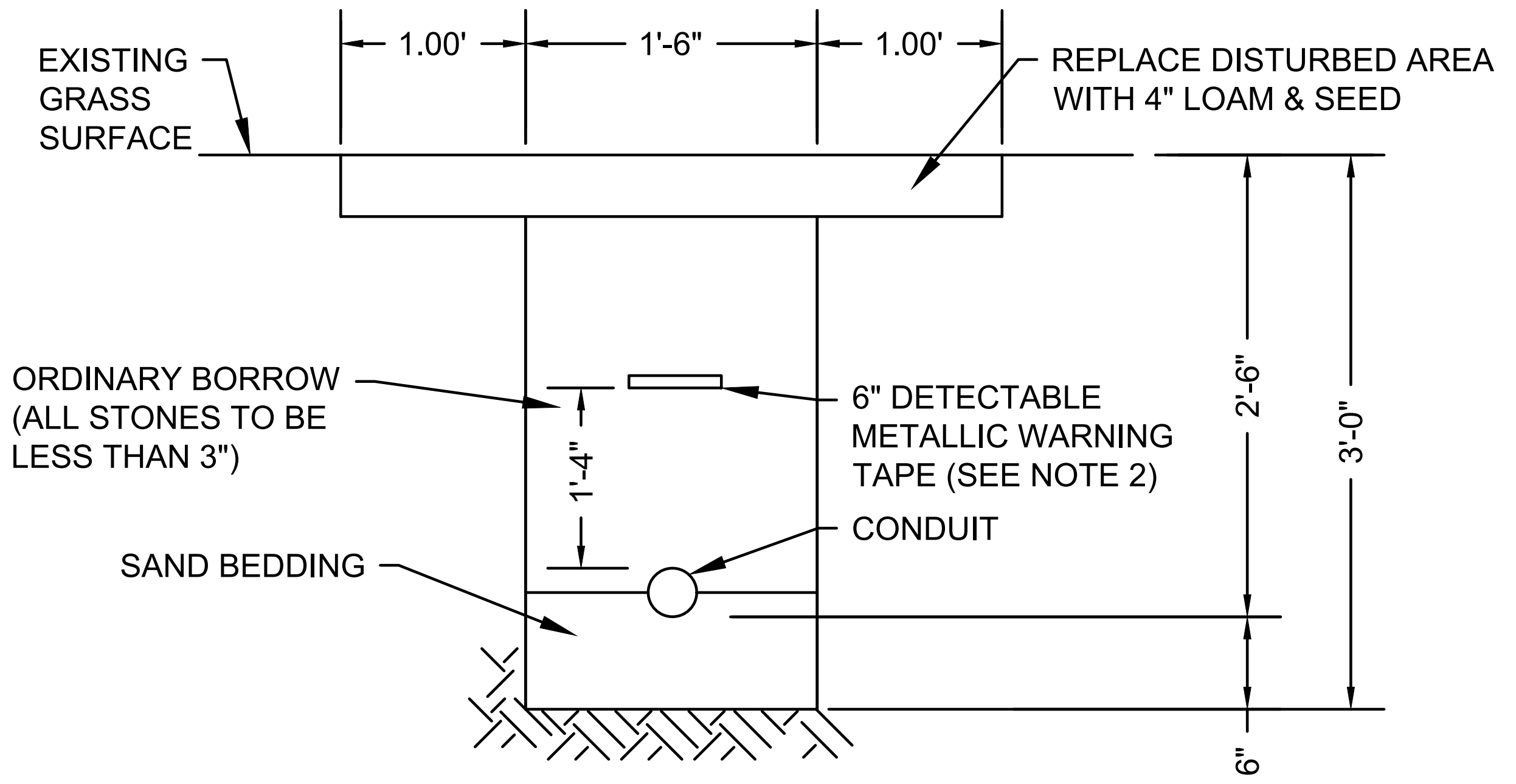
a) WHERE A FORWARD APPROACH IS PROVIDED, PEDESTRIAN PUSH BUTTONS SHALL ABUT AND BE CENTERED ON THE CLEAR GROUND SPACE.

b) WHERE A PARALLEL APPROACH IS PROVIDED, PEDESTRIAN PUSH BUTTONS SHALL BE WITHIN TEN INCHES (10") HORIZONTALLY OF AND CENTERED ON THE CLEAR GROUND SPACE.



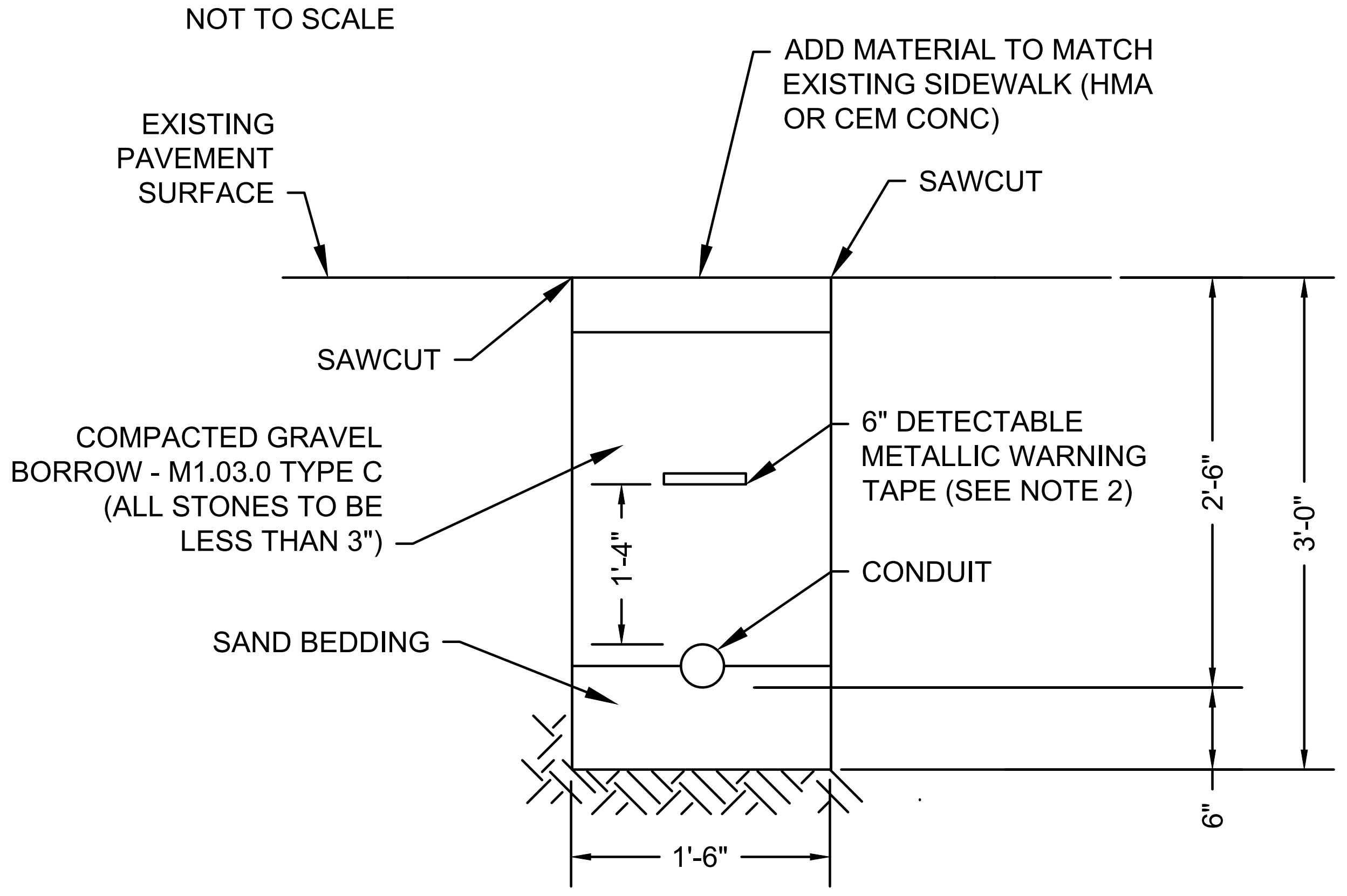
UTILITY POLE

NOT TO SCALE


EXISTING GRASS SURFACE
1.00'
1'-6"
1.00'
REPLACE DISTURBED AREA WITH 4" LOAM & SEED
ORDINARY BORROW (ALL STONES TO BE LESS THAN 3")
6" DETECTABLE METALLIC WARNING TAPE (SEE NOTE 2)
1'-4"
CONDUIT
SAND BEDDING
2'-6"
3'-0"
6"

CONDUIT UNDER GRASS AREAS

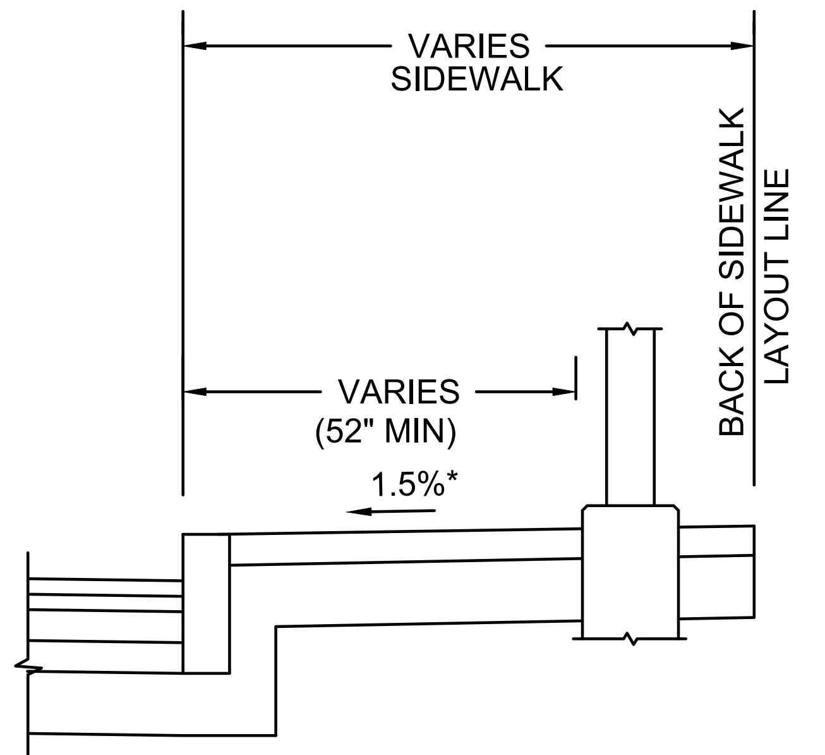
NOT TO SCALE


EXISTING PAVEMENT SURFACE
ADD MATERIAL TO MATCH EXISTING SIDEWALK (HMA OR CEM CONC)
SAWCUT
SAWCUT
COMPACTED GRAVEL BORROW - M1.03.0 TYPE C (ALL STONES TO BE LESS THAN 3")
6" DETECTABLE METALLIC WARNING TAPE (SEE NOTE 2)
1'-4"
CONDUIT
SAND BEDDING
2'-6"
3'-0"
6"
1'-6"

CONDUIT UNDER SIDEWALK AREAS

NOT TO SCALE

* TOLERANCE FOR CONSTRUCTION ±0.5%



TRAFFIC POST

NOT TO SCALE

NOTES:

1. MINIMUM CLEAR PATH ON ALL SIDEWALKS SHALL 52 INCHES, EXCLUDING THE CURB.
2. CONTRACTOR SHALL VERIFY LOCATION OF ALL OBJECTS (SIGNS, POLES ETC.) TO BE SET WITHIN SIDEWALK PRIOR TO FINAL PLACEMENT TO PROVIDE A MINIMUM CLEAR PATH OF 52 INCHES INCLUDING CURB. CONTRACTOR SHALL NOTIFY THE ENGINEER OF ANY LOCATION WHICH CANNOT MEET THE CLEARANCE REQUIREMENTS.

DETAILS SHOWING SIDEWALK CLEARANCES

NUMBER	DATE	MADE BY	CHECKED BY	REVISIONS

DRAWN BY:
DW

DESIGNED BY:
KY

CHECKED BY:
DJ

REGISTERED PROFESSIONAL

KIEN Y. HO
CIVIL ENGINEER
No. 46731

Kien Y Ho
2/8/21

PREPARED BY

BETA
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SUBCONSULTANT

SCALE
NONE

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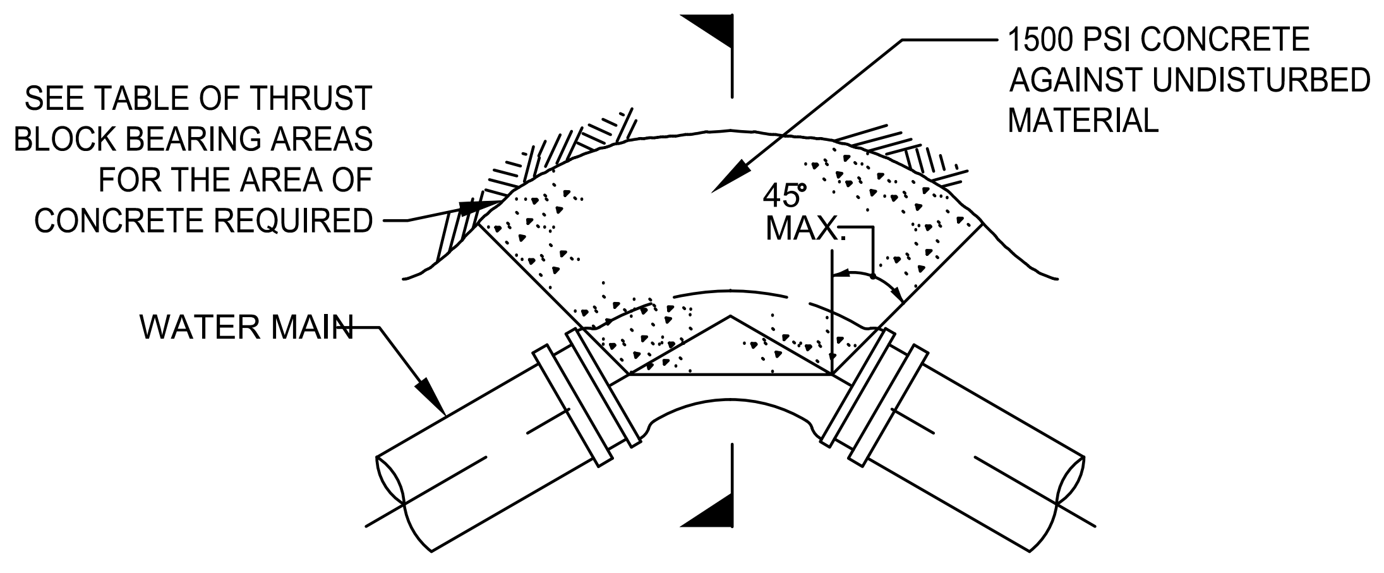
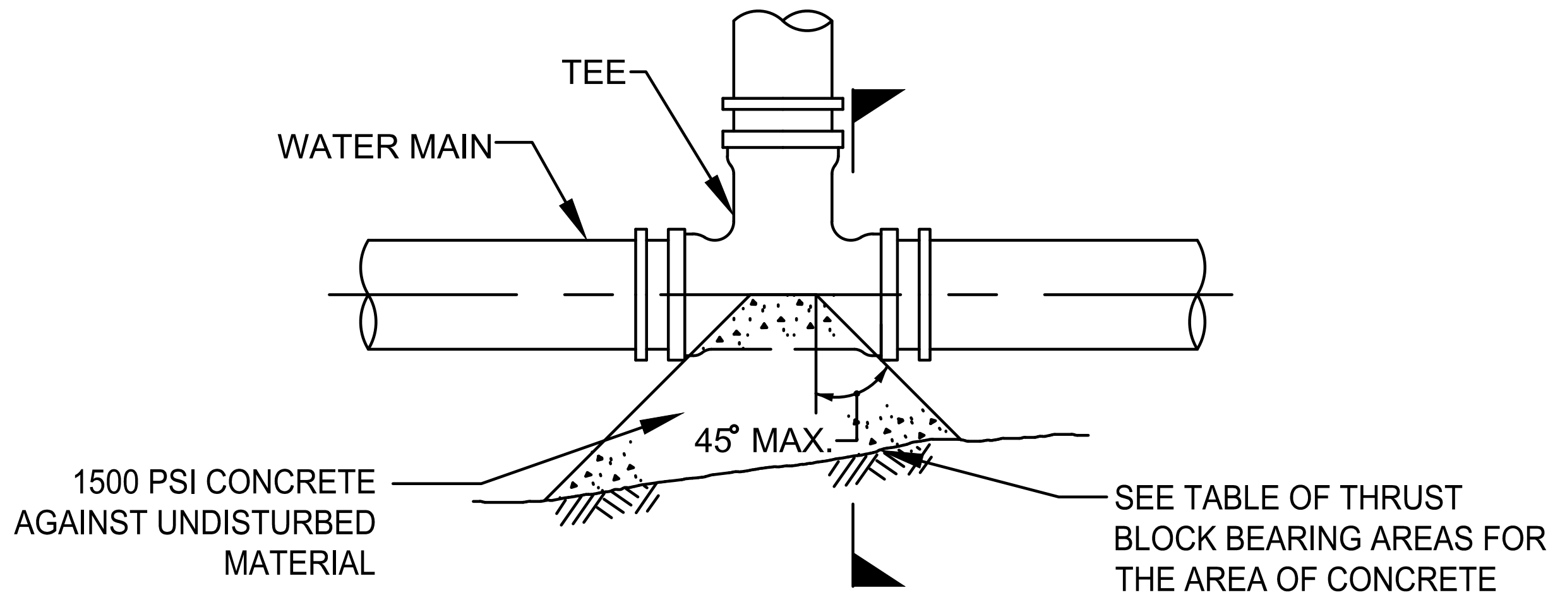
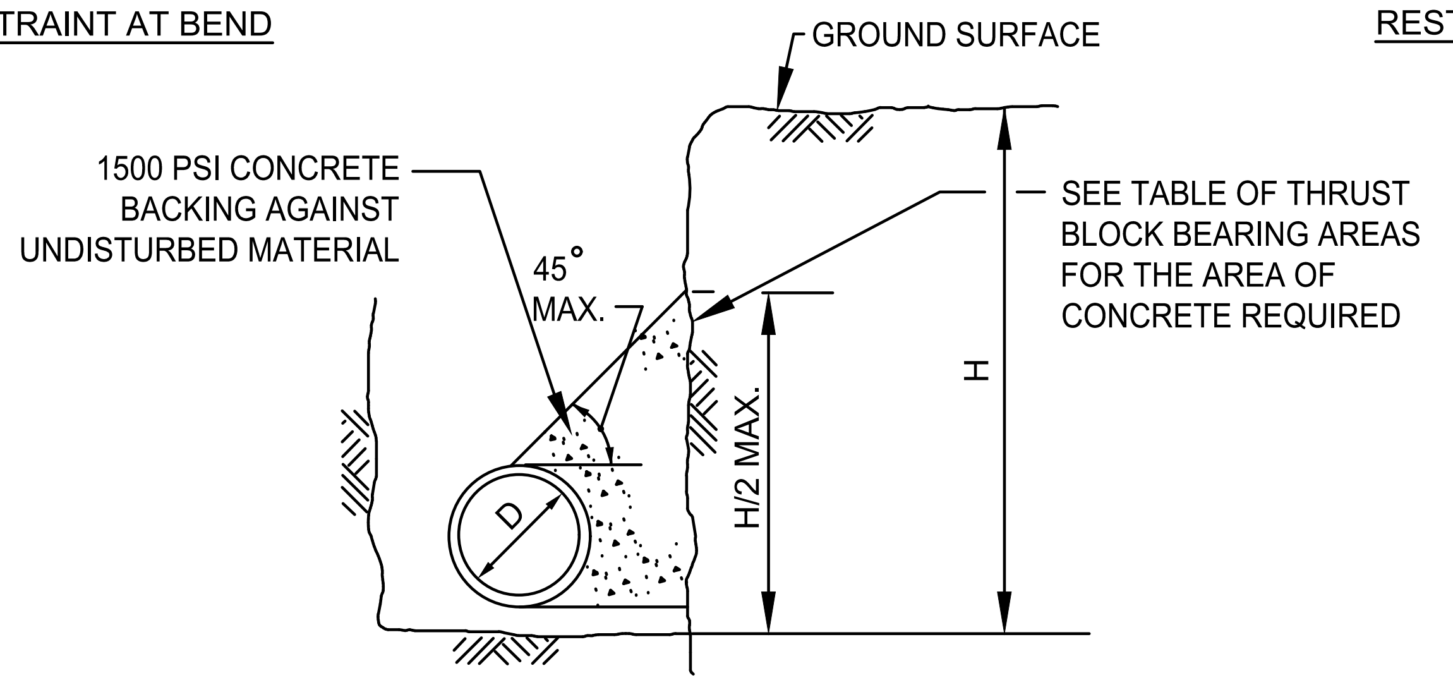

SEE TABLE OF THRUST BLOCK BEARING AREAS FOR THE AREA OF CONCRETE REQUIRED
1500 PSI CONCRETE AGAINST UNDISTURBED MATERIAL
45° MAX.
WATER MAIN

PLAN OF THRUST RESTRAINT AT BEND


TEE
WATER MAIN
1500 PSI CONCRETE AGAINST UNDISTURBED MATERIAL
45° MAX.
SEE TABLE OF THRUST BLOCK BEARING AREAS FOR THE AREA OF CONCRETE REQUIRED

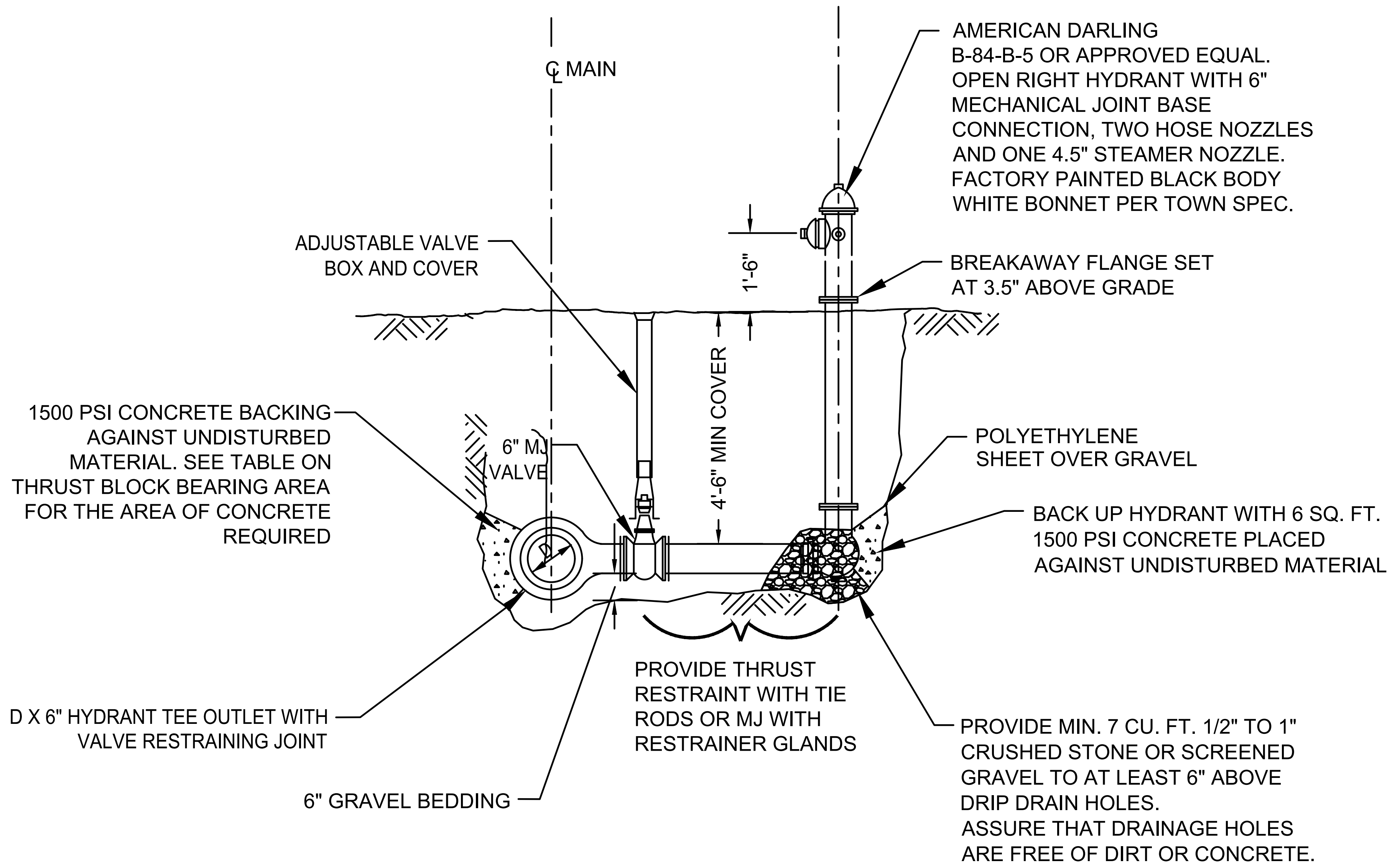
PLAN OF THRUST RESTRAINT AT TEE


GROUND SURFACE
1500 PSI CONCRETE BACKING AGAINST UNDISTURBED MATERIAL
45° MAX.
SEE TABLE OF THRUST BLOCK BEARING AREAS FOR THE AREA OF CONCRETE REQUIRED
D
H/2 MAX.
H

THRUST BLOCK SECTION

THRUST RESTRAINT AT FITTINGS

NOT TO SCALE

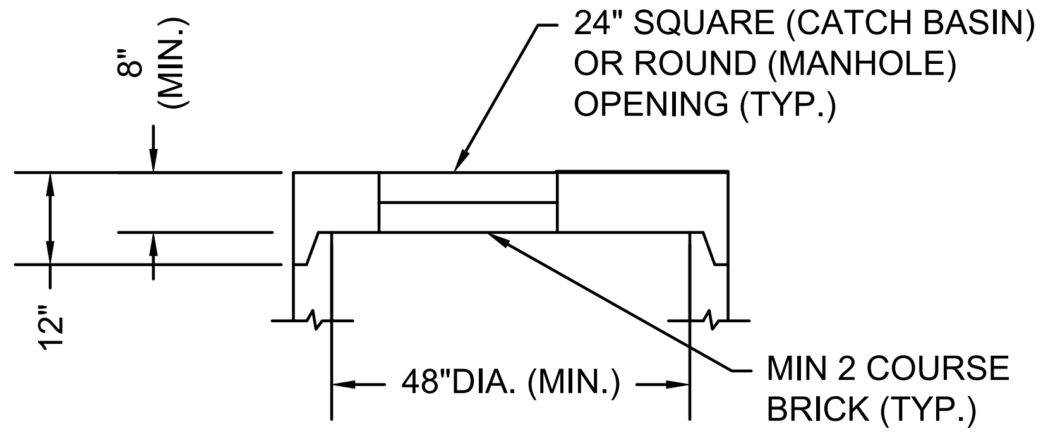

℄ MAIN
AMERICAN DARLING B-84-B-5 OR APPROVED EQUAL. OPEN RIGHT HYDRANT WITH 6" MECHANICAL JOINT BASE CONNECTION, TWO HOSE NOZZLES AND ONE 4.5" STEAMER NOZZLE. FACTORY PAINTED BLACK BODY WHITE BONNET PER TOWN SPEC.
ADJUSTABLE VALVE BOX AND COVER
1'-6"
BREAKAWAY FLANGE SET AT 3.5" ABOVE GRADE
4'-6" MIN COVER
1500 PSI CONCRETE BACKING AGAINST UNDISTURBED MATERIAL. SEE TABLE ON THRUST BLOCK BEARING AREA FOR THE AREA OF CONCRETE REQUIRED
6" MJ VALVE
POLYETHYLENE SHEET OVER GRAVEL
BACK UP HYDRANT WITH 6 SQ. FT. 1500 PSI CONCRETE PLACED AGAINST UNDISTURBED MATERIAL
D X 6" HYDRANT TEE OUTLET WITH VALVE RESTRAINING JOINT
PROVIDE THRUST RESTRAINT WITH TIE RODS OR MJ WITH RESTRAINER GLANDS
PROVIDE MIN. 7 CU. FT. 1/2" TO 1" CRUSHED STONE OR SCREENED GRAVEL TO AT LEAST 6" ABOVE DRIP DRAIN HOLES. ASSURE THAT DRAINAGE HOLES ARE FREE OF DIRT OR CONCRETE.
6" GRAVEL BEDDING

BEARING AREA FOR VARIOUS DIAMETERS						
FITTING	4"	6"	8"	10"	12"	16"
1/32 BEND (11 1/4°)	2 S.F.	2 S.F.	2 S.F.	2 S.F.	3 S.F.	5 S.F.
1/16 BEND (22 1/2°)	2 S.F.	2 S.F.	3 S.F.	3 S.F.	4 S.F.	5 S.F.
1/8 BEND (45°)	2 S.F.	2 S.F.	3 S.F.	5 S.F.	7 S.F.	12 S.F.
1/4 BEND (90°)	3 S.F.	3 S.F.	6 S.F.	9 S.F.	12 S.F.	21 S.F.
TEE/PLUG	2 S.F.	3 S.F.	4 S.F.	6 S.F.	9 S.F.	16 S.F.

NOTES:
1. ALL ELBOWS, BENDS, AND CAPS SHALL BE BRACED WITH CONCRETE THRUST BLOCKS. JOINTS SHALL NOT BE ENCASED IN CONCRETE.
2. BEARING AREA IS AREA OF CONCRETE IN CONTACT WITH WALL OF TRENCH (H X L).
3. HEIGHT AND LENGTH AS REQUIRED TO OBTAIN BEARING AREA SHOWN IN THE TABLE W/ H APPROX. 1/2 L.
4. THRUST BLOCK SIZING BASED ON 150 PSI WATER PRESSURE AND 2000 PSI SOIL BEARING CAPACITY.

TYPICAL HYDRANT ASSEMBLY WITH DRAIN

NOT TO SCALE

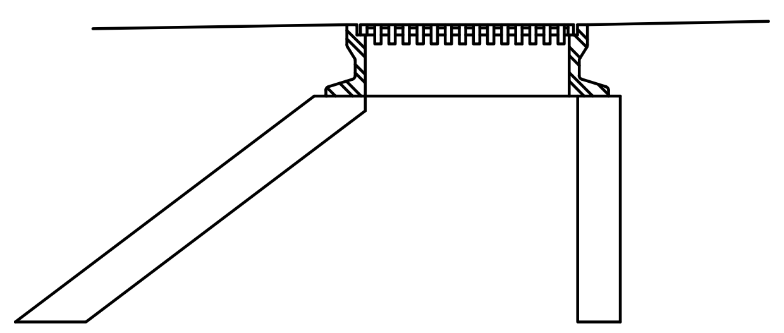

8" (MIN.)
24" SQUARE (CATCH BASIN) OR ROUND (MANHOLE) OPENING (TYP.)
12"
48"DIA. (MIN.)
MIN 2 COURSE BRICK (TYP.)

ALTERNATE TOP SLAB FOR CATCH BASIN OR DRAIN MANHOLE

NOT TO SCALE

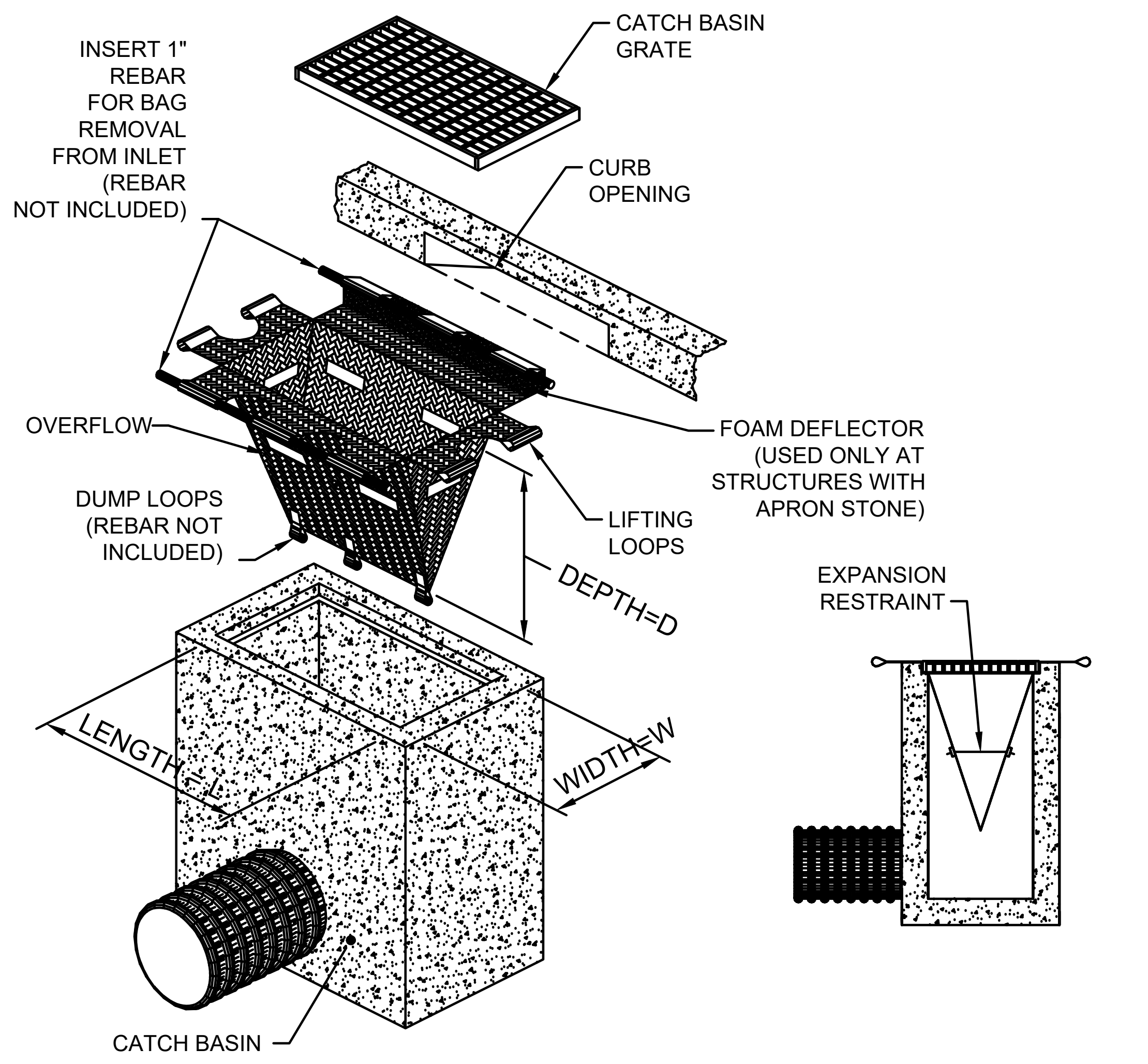
NOTES:

1. BASED ON ACTUAL FIELD CONDITIONS; THE CONTRACTOR SHALL DETERMINE WHICH STYLE OF TOP SECTION SHOULD BE USED.



ALTERNATE ECCENTRIC CONE SECTION FOR CATCH BASIN OR DRAIN MANHOLE

NOT TO SCALE

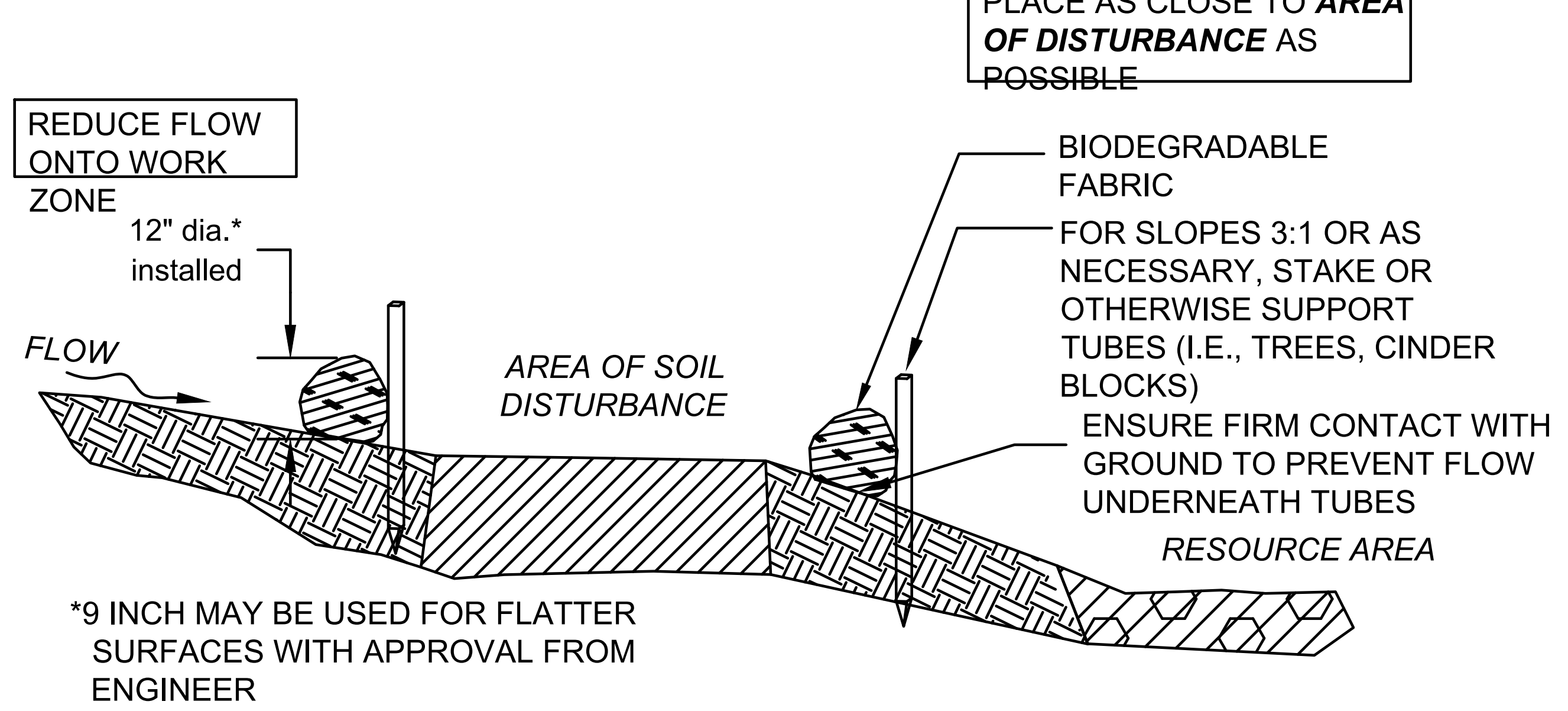

INSERT 1" REBAR FOR BAG REMOVAL FROM INLET (REBAR NOT INCLUDED)
CATCH BASIN GRATE
CURB OPENING
OVERFLOW
FOAM DEFLECTOR (USED ONLY AT STRUCTURES WITH APRON STONE)
DUMP LOOPS (REBAR NOT INCLUDED)
LIFTING LOOPS
DEPTH=D
EXPANSION RESTRAINT
LENGTH=L
WIDTH=W
CATCH BASIN

NOTES
1. LENGTH AND WIDTH OF POLYPROPYLENE FABRIC MUST EXCEED EXISTING CATCH BASIN FRAME DIMENSIONS BY A MINIMUM OF 8".
2. REMOVE CATCH BASIN GRATE AND INSTALL POLYPROPYLENE FABRIC OVER CATCH BASIN FRAME. REPLACE CATCH BASIN GRATE TO SECURE POLYPROPYLENE FABRIC IN PLACE.

CATCH BASIN EROSION CONTROL PROTECTION

NOT TO SCALE

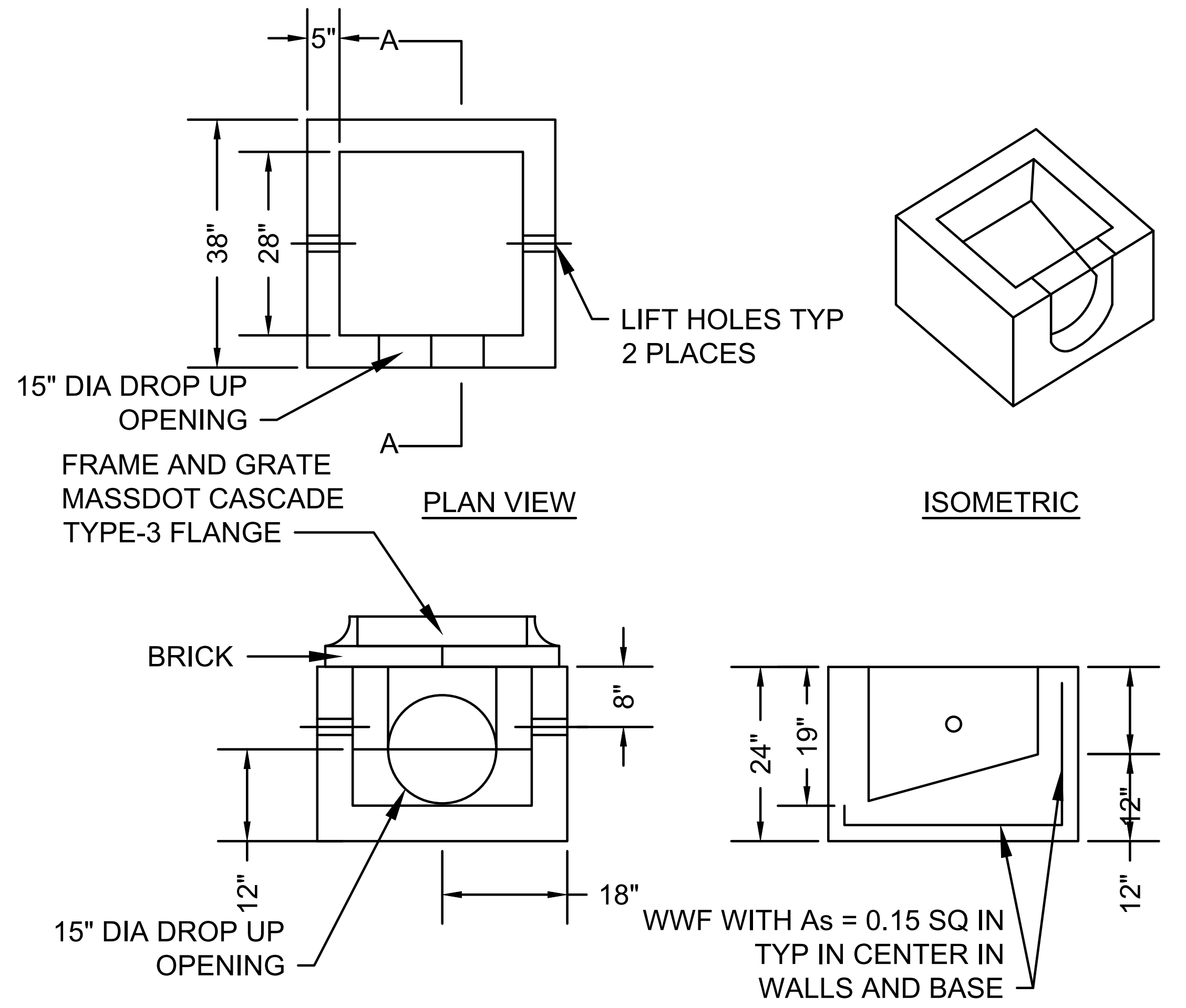
COMPOST FILTER TUBE


PREVENT FLOW OFF SITE: PLACE AS CLOSE TO AREA OF DISTURBANCE AS POSSIBLE
REDUCE FLOW ONTO WORK ZONE
12" dia.* installed
FLOW
AREA OF SOIL DISTURBANCE
BIODEGRADABLE FABRIC
FOR SLOPES 3:1 OR AS NECESSARY, STAKE OR OTHERWISE SUPPORT TUBES (I.E., TREES, CINDER BLOCKS)
ENSURE FIRM CONTACT WITH GROUND TO PREVENT FLOW UNDERNEATH TUBES
RESOURCE AREA

*9 INCH MAY BE USED FOR FLATTER SURFACES WITH APPROVAL FROM ENGINEER

SEDIMENT BARRIERS - COMPOST FILTER TUBES

NOT TO SCALE



GUTTER INLET - SPECIAL

NOT TO SCALE
(ITEM 204.11)

NOTES:
1. DESIGNED FOR AASHTO HS25-44 LOADING
2. CONCRETE STRENGTH fc=4000 PSI
3. REINFORCING STEEL: ASTM A185 (wwf) fy=60,000 PSI
4. CURB INLETS ARE REQUIRED WHEN GUTTER INLETS ARE INSTALLED AGAINST CURBING.

NUMBER	DATE	MADE BY	CHECKED BY	REVISIONS

DRAWN BY: DW
DESIGNED BY: KY
CHECKED BY: DJ

REGISTERED PROFESSIONAL
KIEN Y. HO
CIVIL ENGINEER
No. 46631
2/8/21

PREPARED BY
BETA
www.BETA-Inc.com

SUBCONSULTANT

SCALE
NONE
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TITLE
TOWN CENTER IMPROVEMENTS
CONSTRUCTION DETAILS
LEXINGTON, MASSACHUSETTS

BETA JOB NO. 6331
ISSUE DATE 02/05/2021
SHEET NO. 12 OF 92

2/8/2021 12:05 PM O:\6300S\6331 - LEXINGTON CENTER STREETSCAPE\DRAWING FILES\PLANSET\6331 CONST.DWG (BETA STB BW.STB)

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CIVIL ENGINEER
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2/8/21

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20 0 20 40
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TITLE
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CONSTRUCTION PLAN
LEXINGTON, MASSACHUSETTS

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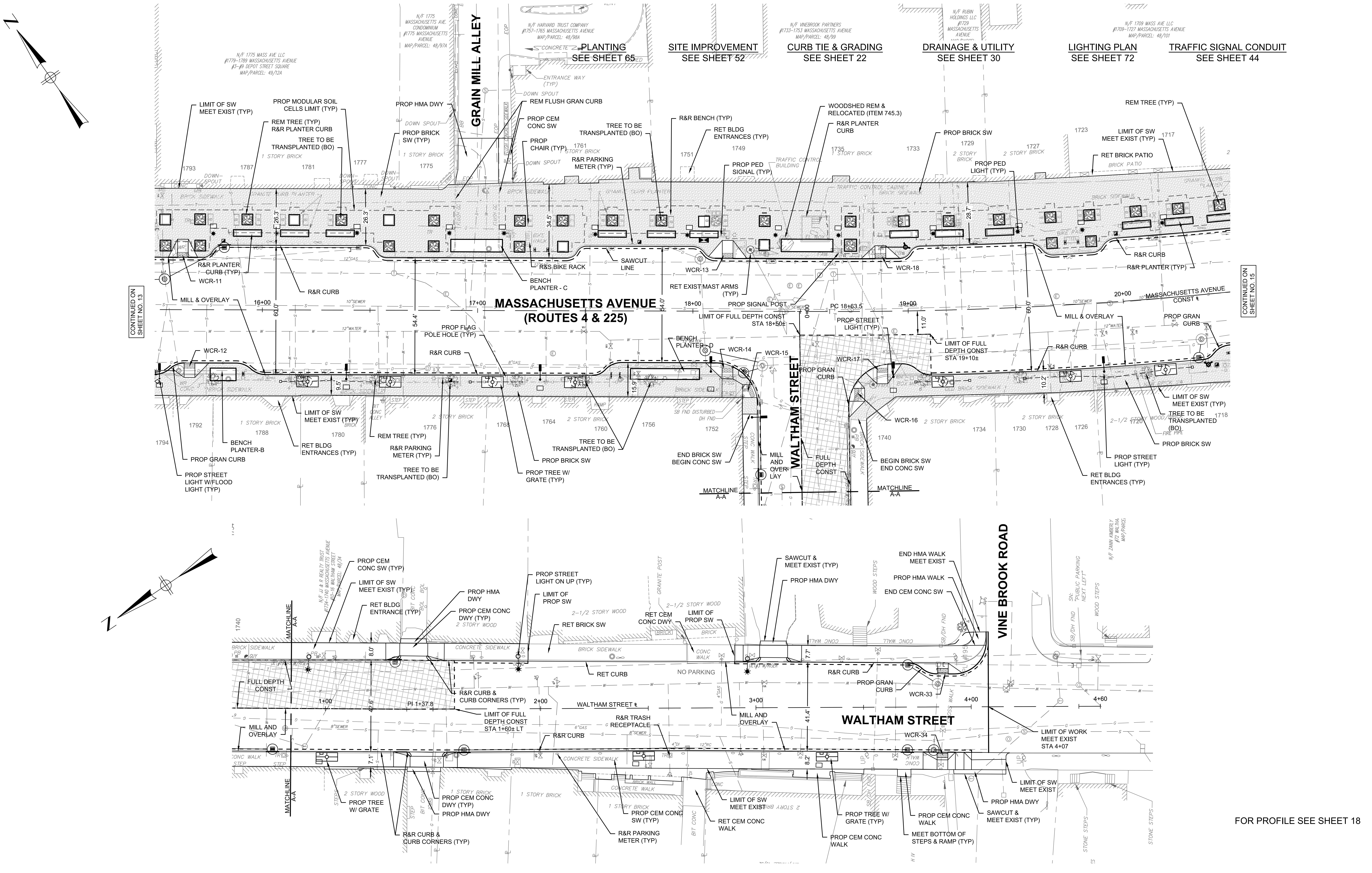
SHEET NO. 13 OF 92



FOR PROFILE SEE SHEET 18

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SHEET NO. 15 OF 92

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LEXINGTON, MASSACHUSETTS

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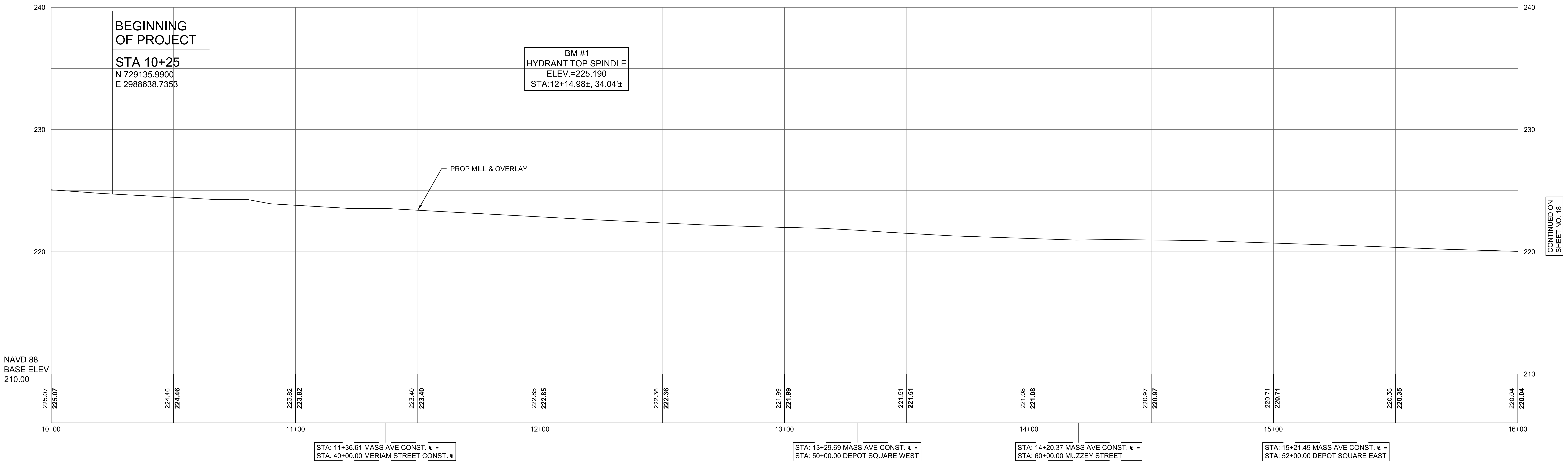
ISSUE DATE 02/05/2021
SHEET NO. 16 OF 92

MASSACHUSETTS AVENUE - BL
STA 10+00 TO STA 16+00.00



CONTINUED ON
SHEET NO. 18

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Kien Y Ho
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20 0 20 40
4 0 4 8
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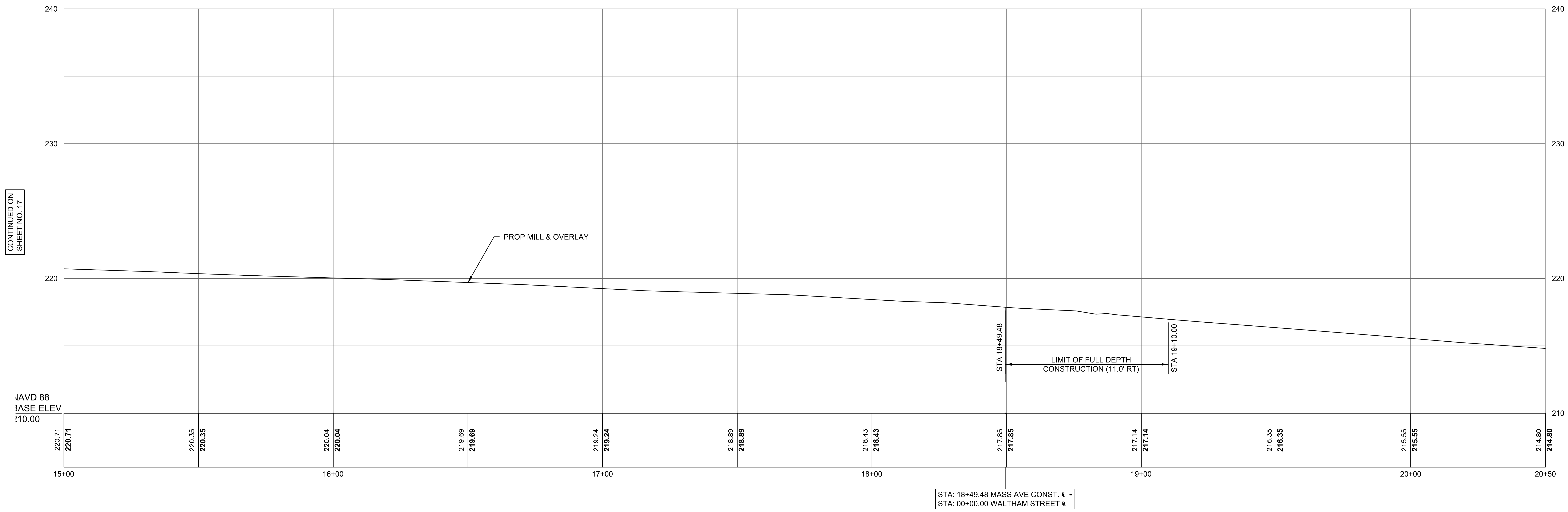
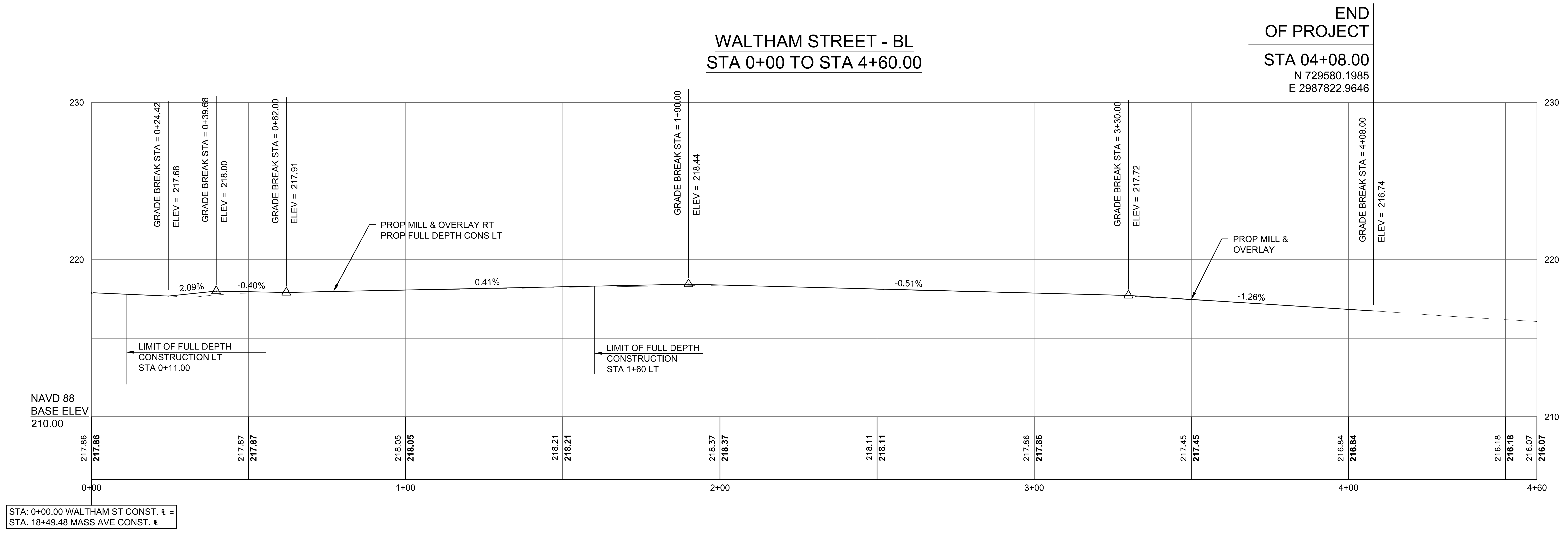
TOWN CENTER IMPROVEMENTS
PROFILES
LEXINGTON, MASSACHUSETTS

BETA JOB NO. 6331
ISSUE DATE 02/05/2021
SHEET NO. 17 OF 92

MASSACHUSETTS AVENUE - BL
STA 15+00 TO STA 20+50.00



WALTHAM STREET - BL
STA 0+00 TO STA 4+60.00



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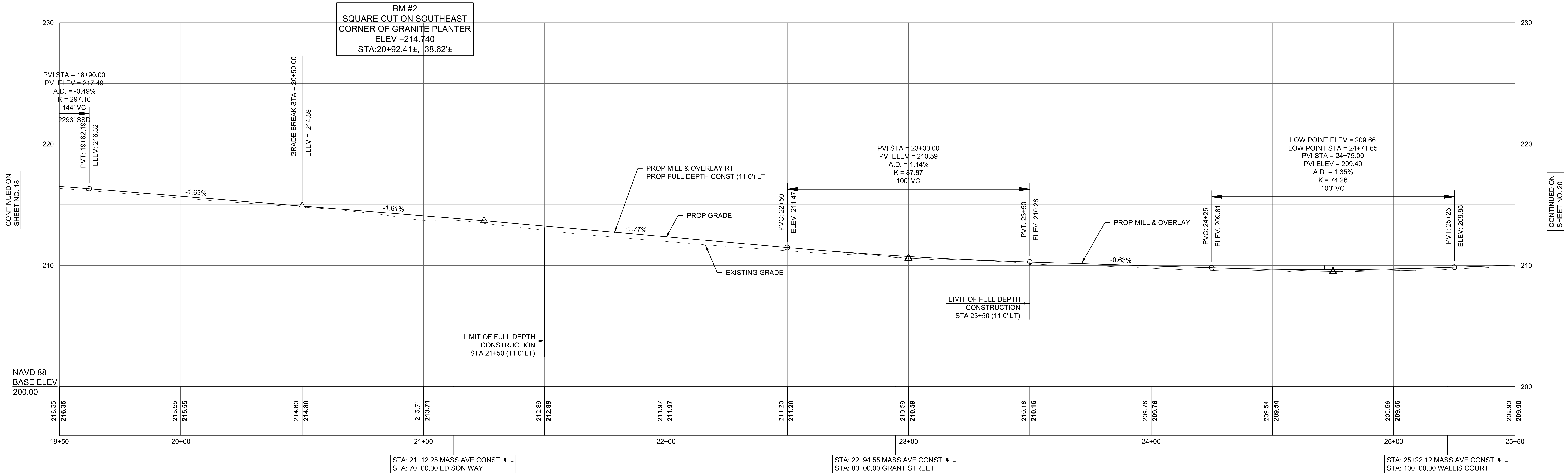
MASSACHUSETTS AVENUE - BL
STA 19+50 TO STA 25+50.00



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CIVIL ENGINEER
No. 46631
Kien Y. Ho
2/8/21

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20 0 20 40
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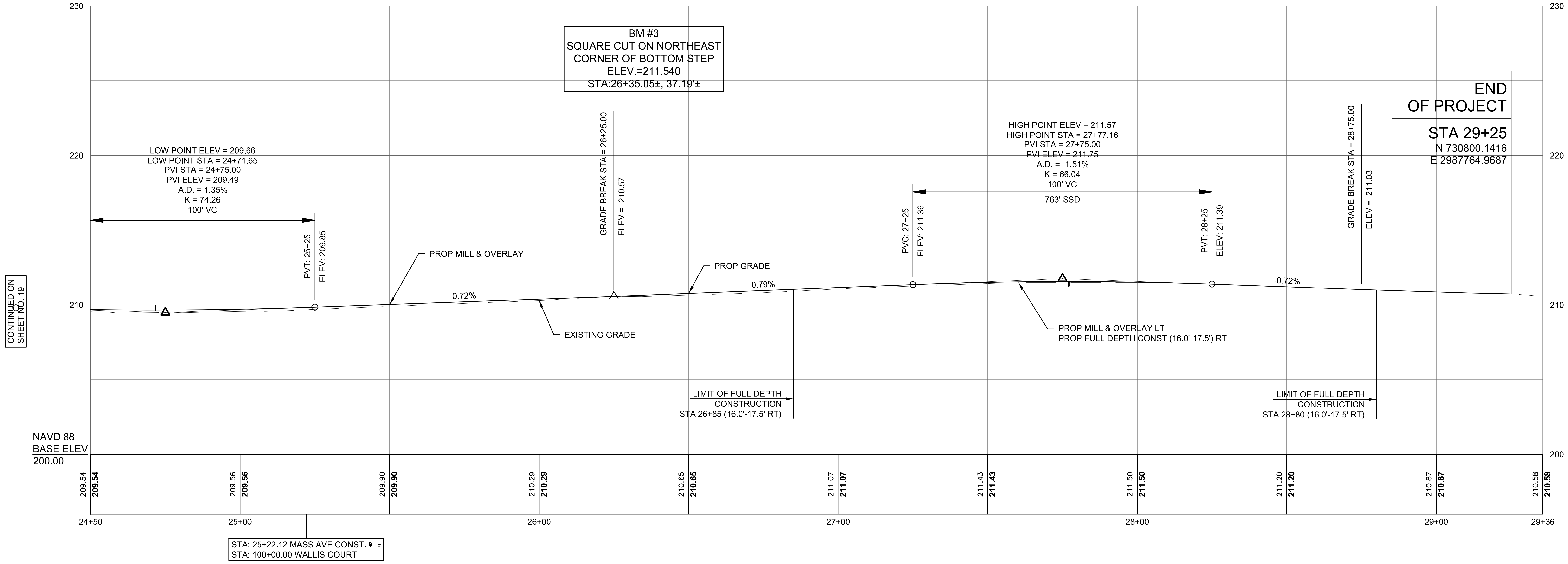
TOWN CENTER IMPROVEMENTS
PROFILES
LEXINGTON, MASSACHUSETTS

BETA JOB NO. 6331
ISSUE DATE 02/05/2021
SHEET NO. 19 OF 92

MASSACHUSETTS AVENUE - BL
STA 24+50 TO STA 29+35.61



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CIVIL ENGINEER
Kenny Ho
2/8/21

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20 0 20 40
4 0 4 8
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TITLE
TOWN CENTER IMPROVEMENTS
PROFILES
LEXINGTON, MASSACHUSETTS

BETA JOB NO. 6331
ISSUE DATE 02/05/2021
SHEET NO. 20 OF 92

MERIAM STREET CONSTRUCTION BASELINE DATA								
NUMBER	STARTING STATION	NORTHING	EASTING	CURVE DATA	LINE DATA	ENDING STATION	NORTHING	EASTING
L8	40+00.00	2988574.1069	729226.9850		N38°44'50"E 190.00'	41+90.00	2988722.2906	729345.9035

DEPOT SQUARE (WEST) CONSTRUCTION BASELINE DATA								
NUMBER	STARTING STATION	NORTHING	EASTING	CURVE DATA	LINE DATA	ENDING STATION	NORTHING	EASTING
L9	50+00.00	2988462.3077	729384.3955		N43°49'24"E 100.00'	51+00.00	2988534.4557	729453.6391

DEPOT SQUARE (EAST) CONSTRUCTION BASELINE DATA								
NUMBER	STARTING STATION	NORTHING	EASTING	CURVE DATA	LINE DATA	ENDING STATION	NORTHING	EASTING
L11	52+00.00	2988351.2441	729540.7702		N35°23'02"E 100.00'	53+00.00	2988432.7732	729598.6754

N
MERIAM STREET
MERIAM STREET CONST ℄
DEPOT SQUARE (ONE-WAY)
DEPOT SQUARE (ONE-WAY)
MASSACHUSETTS AVENUE (ROUTES 4 & 225)
MASSACHUSETTS AVENUE CONST ℄
MUZZEY STREET (ONE-WAY)
CLARKE STREET
TRAVERSE POINT 5 HUB & TACK N 2988651.42 E 729198.02 EL 223.61
TRAVERSE POINT 4 HUB & TACK N 2988477.37 E 729451.48 EL 222.53
TRAVERSE LINE
BOS
S55°31'23"E 307.46'
S49°36'35"E 277.32'
S35°23'02"W 51.13'
S35°23'02"W 46.26'
11+36.61 MASSACHUSETTS AVENUE= 40+00.00 MERIAM STREET
13+29.69 MASSACHUSETTS AVENUE - BL= 50+00.00 DEPOT SQUARE (WEST)
14+20.37 MASSACHUSETTS AVENUE - BL= 60+00.00 MUZZEY STREET
15+21.49 MASSACHUSETTS AVENUE - BL= 52+00.00 DEPOT SQUARE (EAST)
BENCHMARK HYDRANT TOP SPINDLE EL 225.19
BEGIN PROJECT STA 10+25
CONTINUED ON SHEET NO. 22
0" REVEAL
4" MIN REVEAL
MATCH EXIST REVEAL
L=4.74' R=3.00'
L=4.68' R=3.00'
1845
1841
1837
1833
1793
1787
1781
1810
1806
1800
1796
1792
1794
1788
1780
1822
1840
1842-1844
1838

Curve Table				
CURVE #	LENGTH	RADIUS	DELTA	TANGENT
C89	15.09	10.00	086.45	9.40
C91	7.60	10.00	043.53	3.99
C92	7.60	10.00	043.53	3.99
C93	4.48	8.00	032.11	2.30
C94	4.15	6.00	039.64	2.16
C115	7.41	10.00	042.48	3.89
C116	7.10	10.00	040.68	3.71
C117	36.61	25.00	083.91	22.47
C119	7.21	10.00	041.32	3.77
C120	6.23	10.00	035.68	3.22
C121	9.25	10.00	053.02	4.99
C122	7.41	10.00	042.48	3.89
C123	7.41	10.00	042.48	3.89
C124	7.38	10.00	042.27	3.87
C125	7.45	10.00	042.68	3.91

Curve Table				
CURVE #	LENGTH	RADIUS	DELTA	TANGENT
C126	2.80	5.00	032.11	1.44
C127	27.15	19.00	081.87	16.48
C128	2.86	3.00	054.69	1.55
C129	4.79	5.00	054.84	2.59
C130	19.99	20.00	057.25	10.92
C131	6.44	10.00	036.87	3.33
C133	3.22	5.00	036.87	1.67
C134	17.26	10.00	098.89	11.68
C135	2.77	4.00	039.64	1.44
C136	7.85	5.00	090.00	5.00
C137	5.21	5.00	059.69	2.87
C138	2.42	3.00	046.30	1.28
C139	30.55	20.00	087.52	19.15
C141	5.37	5.00	061.49	2.97
C142	6.44	6.00	061.49	3.57

MUZZEY STREET CONSTRUCTION BASELINE DATA								
NUMBER	STARTING STATION	NORTHING	EASTING	CURVE DATA	LINE DATA	ENDING STATION	NORTHING	EASTING
L10	60+00.00	2988409.7963	729458.3302		S35°23'02"W 100.00'	61+00.00	2988328.2673	729400.4250

MASSACHUSETTS AVENUE - BL CONSTRUCTION BASELINE DATA								
NUMBER	STARTING STATION	NORTHING	EASTING	CURVE DATA	LINE DATA	ENDING STATION	NORTHING	EASTING
L1	10+00.00	2988653.2133	729115.6052		S54°36'58"E 863.52'	18+63.52	2988153.1883	729819.6279

NUMBER	DATE	MADE BY	CHECKED BY	REVISIONS

DRAWN BY: NM
DESIGNED BY: KY
CHECKED BY: DJ

REGISTERED PROFESSIONAL
KIEN Y. HO
CIVIL ENGINEER
No. 46731
Kieny Ho
2/8/21

PREPARED BY
BETA
www.BETA-Inc.com

SUBCONSULTANT

SCALE
20 0 20 40
SCALE IN FEET: 1"=20'
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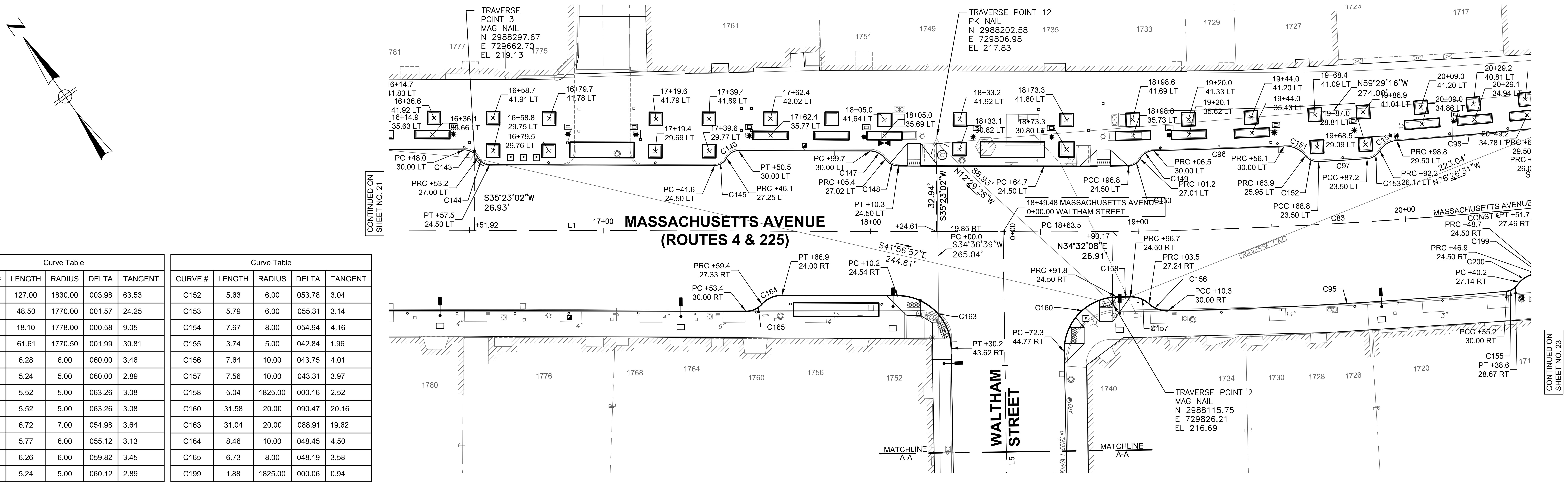
TITLE
TOWN CENTER IMPROVEMENTS
CURB TIE
LEXINGTON, MASSACHUSETTS

BETA JOB NO. 6331
ISSUE DATE 02/05/2021
SHEET NO. 21 OF 92

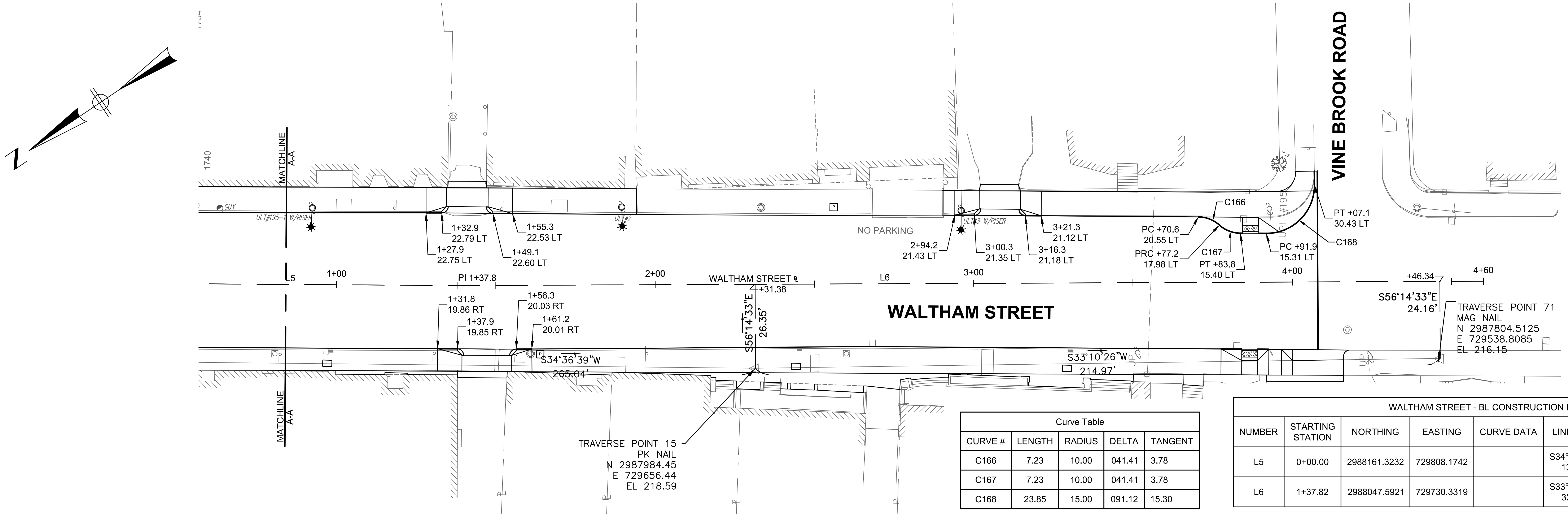
2/8/2021 12:07 PM O:\6300S\6331 - LEXINGTON CENTER STREETSCAPE\DRAWING FILES\PLANSET\6331 TIE.DWG (BETA STB BW.STB)



Curve Table				
CURVE #	LENGTH	RADIUS	DELTA	TANGENT
C95	127.00	1830.00	003.98	63.53
C96	48.50	1770.00	001.57	24.25
C97	18.10	1778.00	000.58	9.05
C98	61.61	1770.50	001.99	30.81
C143	6.28	6.00	060.00	3.46
C144	5.24	5.00	060.00	2.89
C145	5.52	5.00	063.26	3.08
C146	5.52	5.00	063.26	3.08
C147	6.72	7.00	054.98	3.64
C148	5.77	6.00	055.12	3.13
C149	6.26	6.00	059.82	3.45
C150	5.24	5.00	060.12	2.89
C151	9.04	10.00	051.77	4.85

Curve Table				
CURVE #	LENGTH	RADIUS	DELTA	TANGENT
C152	5.63	6.00	053.78	3.04
C153	5.79	6.00	055.31	3.14
C154	7.67	8.00	054.94	4.16
C155	3.74	5.00	042.84	1.96
C156	7.64	10.00	043.75	4.01
C157	7.56	10.00	043.31	3.97
C158	5.04	1825.00	000.16	2.52
C160	31.58	20.00	090.47	20.16
C163	31.04	20.00	088.91	19.62
C164	8.46	10.00	048.45	4.50
C165	6.73	8.00	048.19	3.58
C199	1.88	1825.00	000.06	0.94
C200	7.41	9.98	042.55	3.89

MASSACHUSETTS AVENUE - BL CONSTRUCTION BASELINE DATA								
NUMBER	STARTING STATION	NORTHING	EASTING	CURVE DATA	LINE DATA	ENDING STATION	NORTHING	EASTING
C83	18+63.52	2988153.1883	729819.6279	R 1800.00' Δ= 15°08'24" L=475.64' T=239.21'		23+39.16	2987931.9008	730239.0902
L1	10+00.00	2988653.2133	729115.6052		S54°36'58"E 863.52'	18+63.52	2988153.1883	729819.6279



Curve Table				
CURVE #	LENGTH	RADIUS	DELTA	TANGENT
C166	7.23	10.00	041.41	3.78
C167	7.23	10.00	041.41	3.78
C168	23.85	15.00	091.12	15.30

WALTHAM STREET - BL CONSTRUCTION BASELINE DATA								
NUMBER	STARTING STATION	NORTHING	EASTING	CURVE DATA	LINE DATA	ENDING STATION	NORTHING	EASTING
L5	0+00.00	2988161.3232	729808.1742		S34°23'22"W 137.82'	1+37.82	2988047.5921	729730.3319
L6	1+37.82	2988047.5921	729730.3319		S33°45'27"W 322.18'	4+60.00	2987779.7319	729551.3032

NUMBER	DATE	MADE BY	CHECKED BY	REVISIONS

DRAWN BY: NM
DESIGNED BY: KY
CHECKED BY: DJ

REGISTERED PROFESSIONAL
KIEN Y. HO
CIVIL ENGINEER
No. 46731
2/8/21

PREPARED BY
BETA
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SUBCONSULTANT

SCALE
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SCALE IN FEET: 1"=20'
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TITLE

TOWN CENTER IMPROVEMENTS

CURB TIE

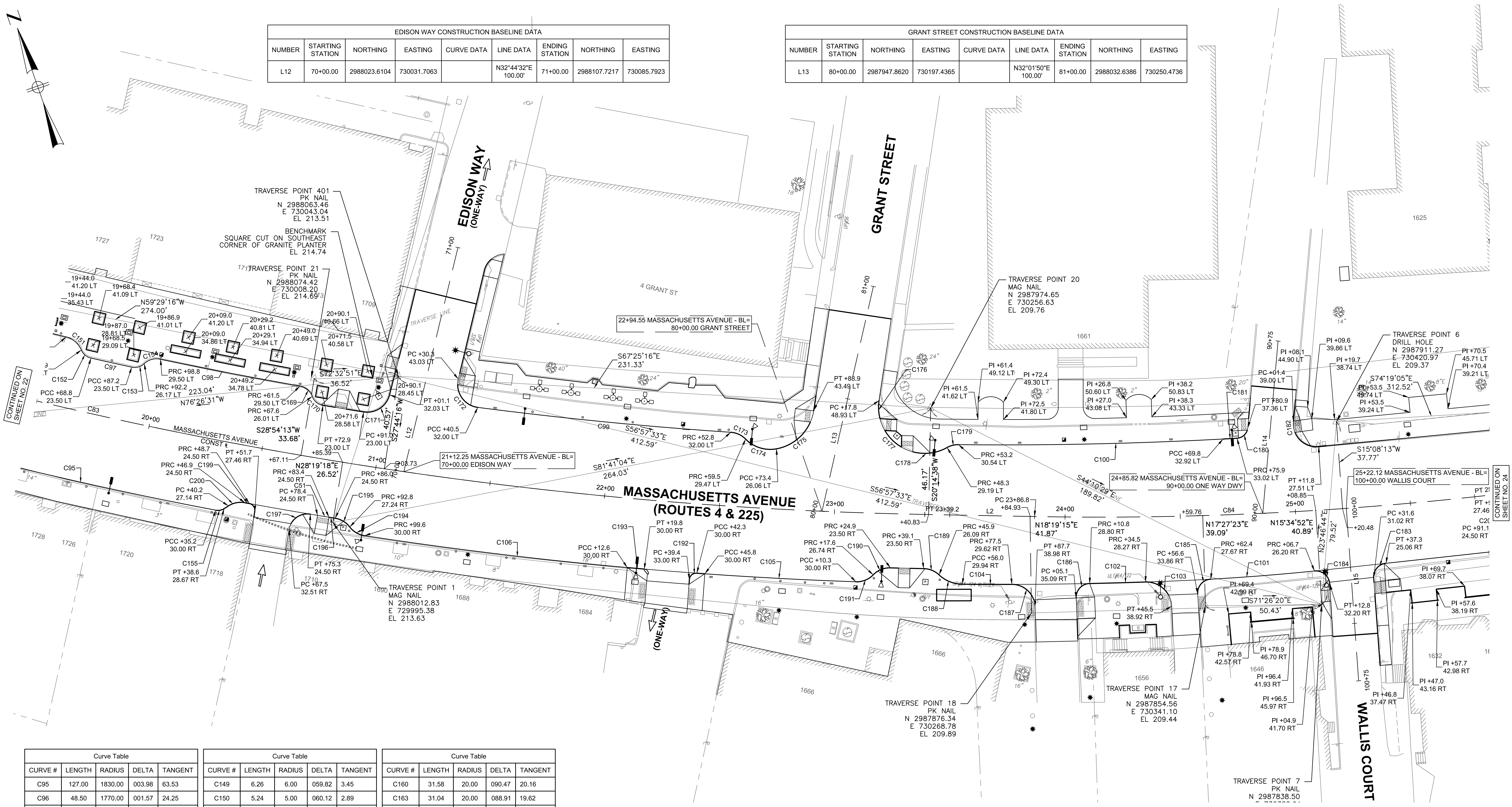
LEXINGTON, MASSACHUSETTS

BETA JOB NO. 6331
ISSUE DATE 02/05/2021
SHEET NO. 22 OF 92

2/8/2021 12:07 PM O:\6300S\6331 - LEXINGTON CENTER STREETSCAPE\DRAWING FILES\PLANSET\6331 TIE.DWG (BETA STB BW.STB)

EDISON WAY CONSTRUCTION BASELINE DATA								
NUMBER	STARTING STATION	NORTHING	EASTING	CURVE DATA	LINE DATA	ENDING STATION	NORTHING	EASTING
L12	70+00.00	2988023.6104	730031.7063		N32°44'32"E 100.00'	71+00.00	2988107.7217	730085.7923

GRANT STREET CONSTRUCTION BASELINE DATA								
NUMBER	STARTING STATION	NORTHING	EASTING	CURVE DATA	LINE DATA	ENDING STATION	NORTHING	EASTING
L13	80+00.00	2987947.8620	730197.4365		N32°01'50"E 100.00'	81+00.00	2988032.6386	730250.4736



N
EDISON WAY (ONE-WAY)
GRANT STREET
MASSACHUSETTS AVENUE (ROUTES 4 & 225)
WALLIS COURT
(ONE-WAY)
4 GRANT ST
CONTINUED ON SHEET NO. 22
CONTINUED ON SHEET NO. 24
TRAVERSE POINT 401 PK NAIL N 2988063.46 E 730043.04 EL 213.51
BENCHMARK SQUARE CUT ON SOUTHEAST CORNER OF GRANITE PLANTER EL 214.74
TRAVERSE POINT 21 PK NAIL N 2988074.42 E 730008.20 EL 214.69
TRAVERSE POINT 20 MAG NAIL N 2987974.65 E 730256.63 EL 209.76
TRAVERSE POINT 6 DRILL HOLE N 2987911.27 E 730420.97 EL 209.37
TRAVERSE POINT 1 MAG NAIL N 2988012.83 E 729995.38 EL 213.63
TRAVERSE POINT 18 PK NAIL N 2987876.34 E 730268.78 EL 209.89
TRAVERSE POINT 17 MAG NAIL N 2987854.56 E 730341.10 EL 209.44
TRAVERSE POINT 7 PK NAIL N 2987838.50
22+94.55 MASSACHUSETTS AVENUE - BL= 80+00.00 GRANT STREET
21+12.25 MASSACHUSETTS AVENUE - BL= 70+00.00 EDISON WAY
24+85.82 MASSACHUSETTS AVENUE - BL= 90+00.00 ONE WAY DWY
25+22.12 MASSACHUSETTS AVENUE - BL= 100+00.00 WALLIS COURT
N59°29'16"W 274.00'
N76°26'31"W 223.04'
S72°32'51"E 36.52'
S28°54'13"W 33.68'
N28°19'18"E 26.52'
S27°44'16"W 40.57'
S67°25'16"E 231.33'
S56°57'33"E 412.59'
S81°41'04"E 264.03'
S20°14'38"W 46.17'
S44°10'29"E 189.82'
N18°19'15"E 41.87'
N17°27'23"E 39.09'
N15°34'52"E 40.89'
N23°46'44"E 79.52'
S74°19'05"E 312.52'
S15°08'13"W 37.77'
S71°26'20"E 50.43'
MASSACHUSETTS AVENUE CONST.
20+00
21+00
22+00
23+00
24+00
25+00
71+00
81+00
90+00
90+75
100+00
100+75
C83
C84
C95
C97
C98
C99
C100
C101
C102
C103
C104
C105
C106
L2
L12
L13
L14
L15
1727
1723
1709
1728
1726
1720
1718
1710
1690
1688
1684
1666
1661
1656
1646
1632
1625

Curve Table				
CURVE #	LENGTH	RADIUS	DELTA	TANGENT
C95	127.00	1830.00	003.98	63.53
C96	48.50	1770.00	001.57	24.25
C97	18.10	1778.00	000.58	9.05
C98	61.61	1770.50	001.99	30.81
C143	6.28	6.00	060.00	3.46
C144	5.24	5.00	060.00	2.89
C145	5.52	5.00	063.26	3.08
C146	5.52	5.00	063.26	3.08
C147	6.72	7.00	054.98	3.64
C148	5.77	6.00	055.12	3.13

Curve Table				
CURVE #	LENGTH	RADIUS	DELTA	TANGENT
C149	6.26	6.00	059.82	3.45
C150	5.24	5.00	060.12	2.89
C151	9.04	10.00	051.77	4.85
C152	5.63	6.00	053.78	3.04
C153	5.79	6.00	055.31	3.14
C154	7.67	8.00	054.94	4.16
C155	3.74	5.00	042.84	1.96
C156	7.64	10.00	043.75	4.01
C157	7.56	10.00	043.31	3.97
C158	5.04	1825.00	000.16	2.52

Curve Table				
CURVE #	LENGTH	RADIUS	DELTA	TANGENT
C160	31.58	20.00	090.47	20.16
C163	31.04	20.00	088.91	19.62
C164	8.46	10.00	048.45	4.50
C165	6.73	8.00	048.19	3.58
C199	1.88	1825.00	000.06	0.94
C200	7.41	9.98	042.55	3.89

MASSACHUSETTS AVENUE - BL CONSTRUCTION BASELINE DATA								
NUMBER	STARTING STATION	NORTHING	EASTING	CURVE DATA	LINE DATA	ENDING STATION	NORTHING	EASTING
C83	18+63.52	2988153.1883	729819.6279	R=1800.00' Δ=15°08'24" L=475.64' T=239.21'		23+39.16	2987931.9008	730239.0902
C84	23+86.78	2987915.4241	730283.7671	R=1500.00' Δ=7°18'22" L=191.27' T=95.76'		25+78.05	2987860.8464	730466.9502
L2	23+39.16	2987931.9008	730239.0902		S69°45'22"E 47.62'	23+86.78	2987915.4241	730283.7671

WALLIS COURT CONSTRUCTION BASELINE DATA								
NUMBER	STARTING STATION	NORTHING	EASTING	CURVE DATA	LINE DATA	ENDING STATION	NORTHING	EASTING
L15	100+00.00	2987874.3807	730412.6915		S15°04'27"W 75.00'	100+75.00	2987801.9614	730393.1864

NUMBER	DATE	MADE BY	CHECKED BY	REVISIONS

DRAWN BY: NM

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CHECKED BY: DJ

REGISTERED PROFESSIONAL

KIEN Y. HO
CIVIL ENGINEER
2/8/21

PREPARED BY

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TITLE

TOWN CENTER IMPROVEMENTS

CURB TIE

LEXINGTON, MASSACHUSETTS

BETA JOB NO. 6331

ISSUE DATE 02/05/2021

SHEET NO. 23 OF 92

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MASSACHUSETTS AVENUE - BL CONSTRUCTION BASELINE DATA								
NUMBER	STARTING STATION	NORTHING	EASTING	CURVE DATA	LINE DATA	ENDING STATION	NORTHING	EASTING
C84	23+86.78	2987915.4241	730283.7671	R = 1500.00' Δ= 7°18'22" L=191.27' T=95.76'		25+78.05	2987860.8464	730466.9502
C85	26+46.56	2987845.5066	730533.7244	R = 1500.00' Δ= 5°06'33" L=133.75' T=66.92'		27+80.32	2987809.7912	730662.5760
L3	25+78.05	2987860.8464	730466.9502		S77°03'43"E 68.51'	26+46.56	2987845.5066	730533.7244
L4	27+80.32	2987809.7912	730662.5760		S71°57'11"E 219.68'	30+00.00	2987741.7340	730871.4518

Curve Table				
CURVE #	LENGTH	RADIUS	DELTA	TANGENT
C101	45.14	1000.00	002.59	22.57
C107	38.34	500.00	004.39	19.18
C109	90.49	1476.00	003.51	45.26
C180	6.07	5.00	069.61	3.48
C181	6.03	1770.00	000.20	3.01
C182	4.76	10.00	027.27	2.43
C184	9.66	6.00	092.25	6.24
C206	15.88	10.00	090.96	10.17
C207	15.84	10.00	090.78	10.14
C208	4.67	3.00	089.22	2.96

WALLIS COURT CONSTRUCTION BASELINE DATA								
NUMBER	STARTING STATION	NORTHING	EASTING	CURVE DATA	LINE DATA	ENDING STATION	NORTHING	EASTING
L15	100+00.00	2987874.3807	730412.6915		S15°04'27"W 75.00'	100+75.00	2987801.9614	730393.1864

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2/8/21

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LEXINGTON, MASSACHUSETTS

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TOWN CENTER IMPROVEMENTS

GRADING PLAN

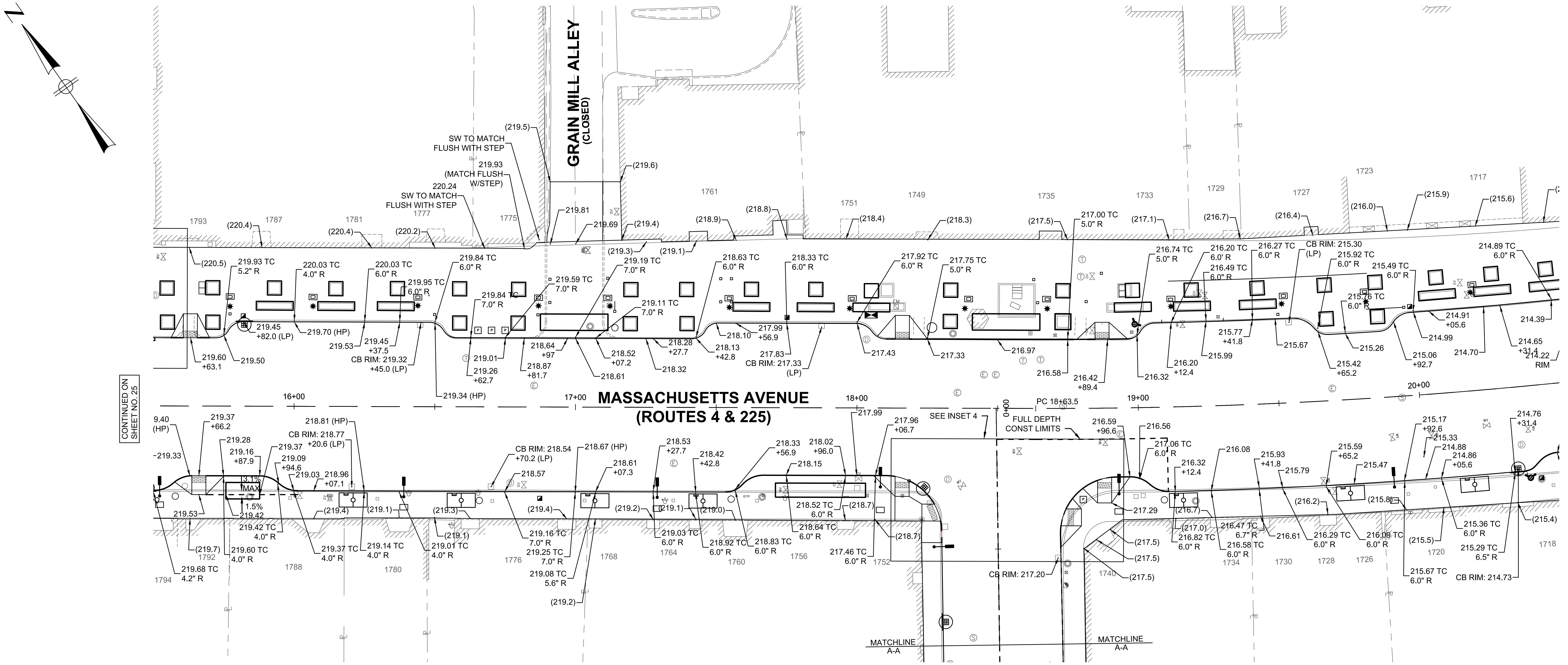
LEXINGTON, MASSACHUSETTS

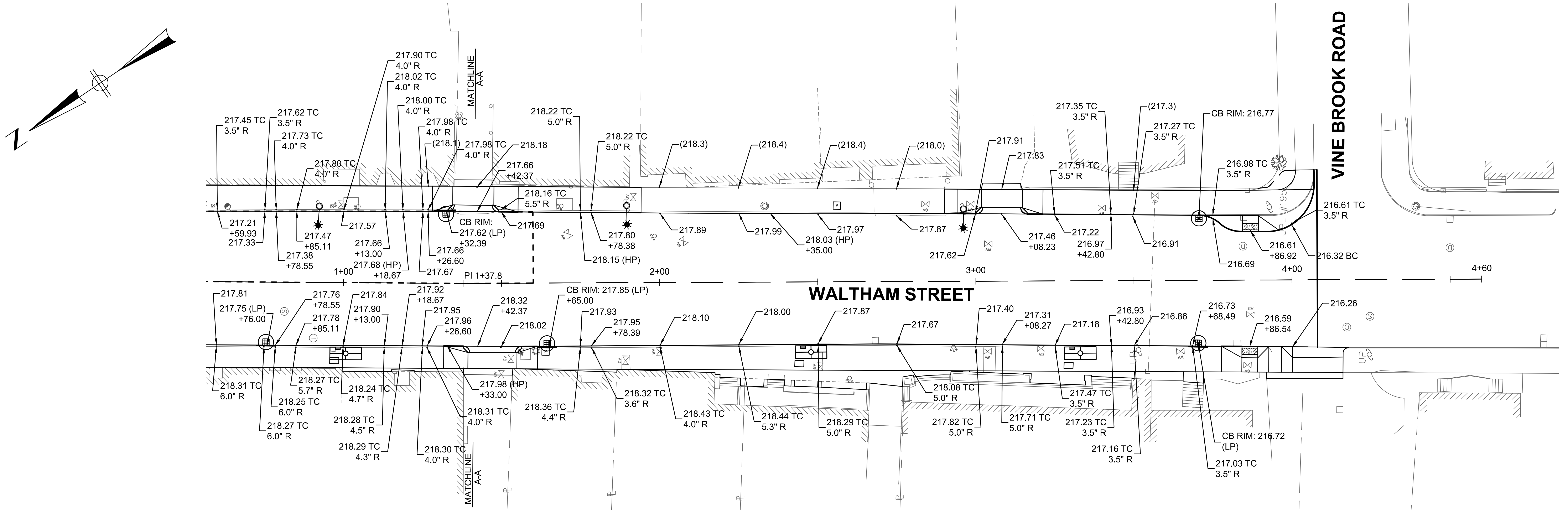
BETA JOB NO. 6331

ISSUE DATE 02/05/2021

SHEET NO. 25 OF 92

2/8/2021 12:09 PM O:\6300S\6331 - LEXINGTON CENTER STREETSCAPE\DRAWING FILES\PLANSET\6331 GRADING.DWG (BETA STB BW.STB)





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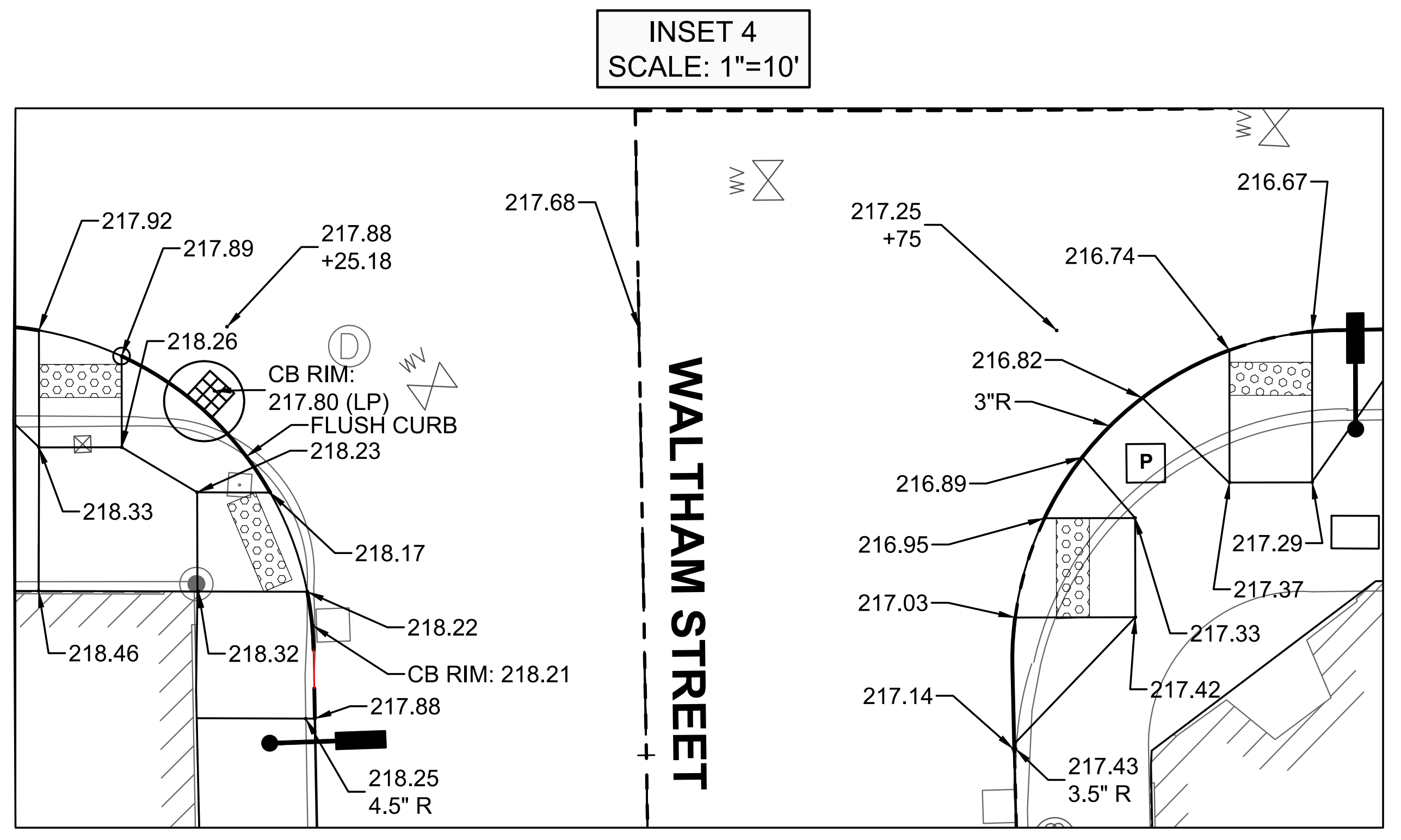

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REGISTERED PROFESSIONAL
KIEN Y. HO
CIVIL ENGINEER
No. 46[illegible]31
Kien Ho
2/8/21

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TOWN CENTER IMPROVEMENTS
GRADING PLAN
LEXINGTON, MASSACHUSETTS

BETA JOB NO. 6331
ISSUE DATE 02/05/2021
SHEET NO. 26 OF 92

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KIEN Y. HO
CIVIL ENGINEER
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TOWN CENTER IMPROVEMENTS

GRADING PLAN

LEXINGTON, MASSACHUSETTS

BETA JOB NO. 6331

ISSUE DATE 02/05/2021

SHEET NO. 27 OF 92

NUMBER	DATE	MADE BY	CHECKED BY	REVISIONS

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KIEN Y.
HO
CIVIL ENGINEER
No. 46731

Kien Ho
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TOWN CENTER IMPROVEMENTS

GRADING PLAN

LEXINGTON, MASSACHUSETTS

BETA JOB NO. 6331

ISSUE DATE 02/05/2021

SHEET NO. 28 OF 92

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KY

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CIVIL ENGINEER
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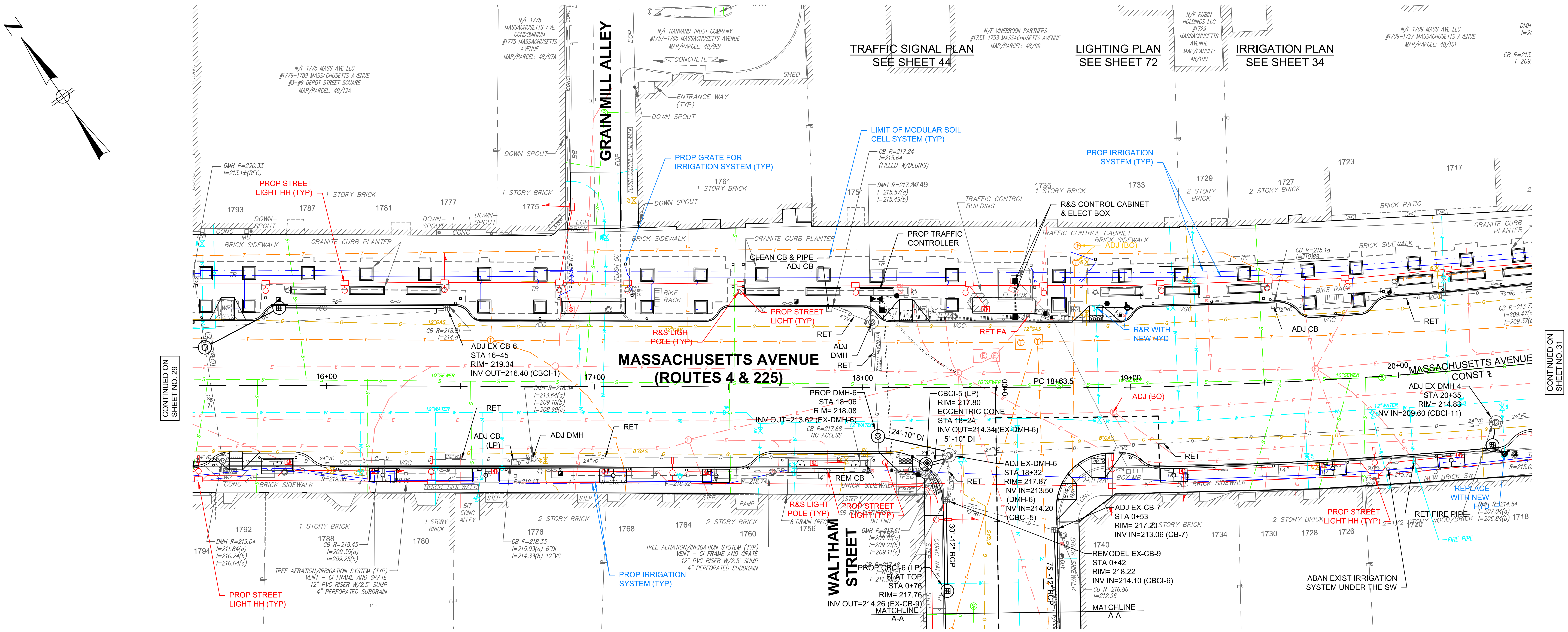
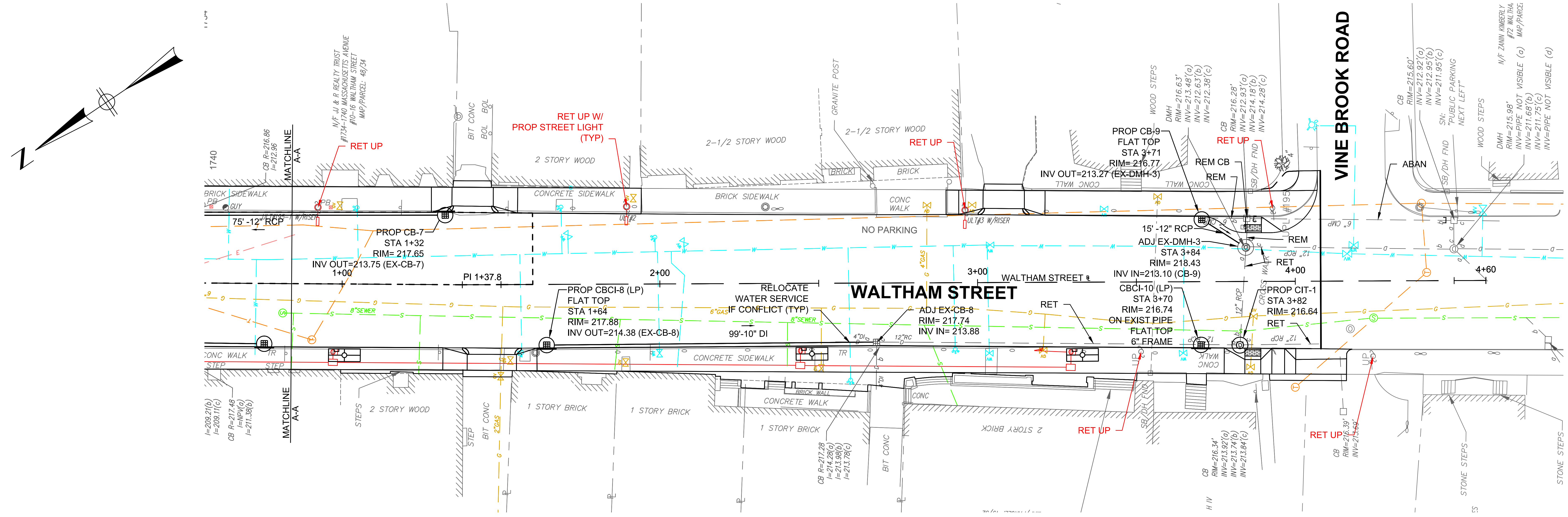
TOWN CENTER IMPROVEMENTS
DRAINAGE & UTILITY PLAN
LEXINGTON, MASSACHUSETTS

BETA JOB NO. 6331
ISSUE DATE 02/05/2021
SHEET NO. 29 OF 92

2/8/2021 12:11 PM O:\6300S\6331 - LEXINGTON CENTER STREETSCAPE\DRAWING FILES\PLANSET\6331 DRAIN UTIL.DWG (BETA STB BW STB)





UTILITY NOTES

1. ALL EXISTING GATE BOXES, SERVICE BOXES, AND SEWER MANHOLES WITHIN PROPOSED SIDEWALK AND ROADWAY AREAS TO BE MILLED AND OVERLAY OR RECONSTRUCTED SHALL BE ADJUSTED TO THE PROPOSED GRADES UNLESS OTHERWISE NOTED.

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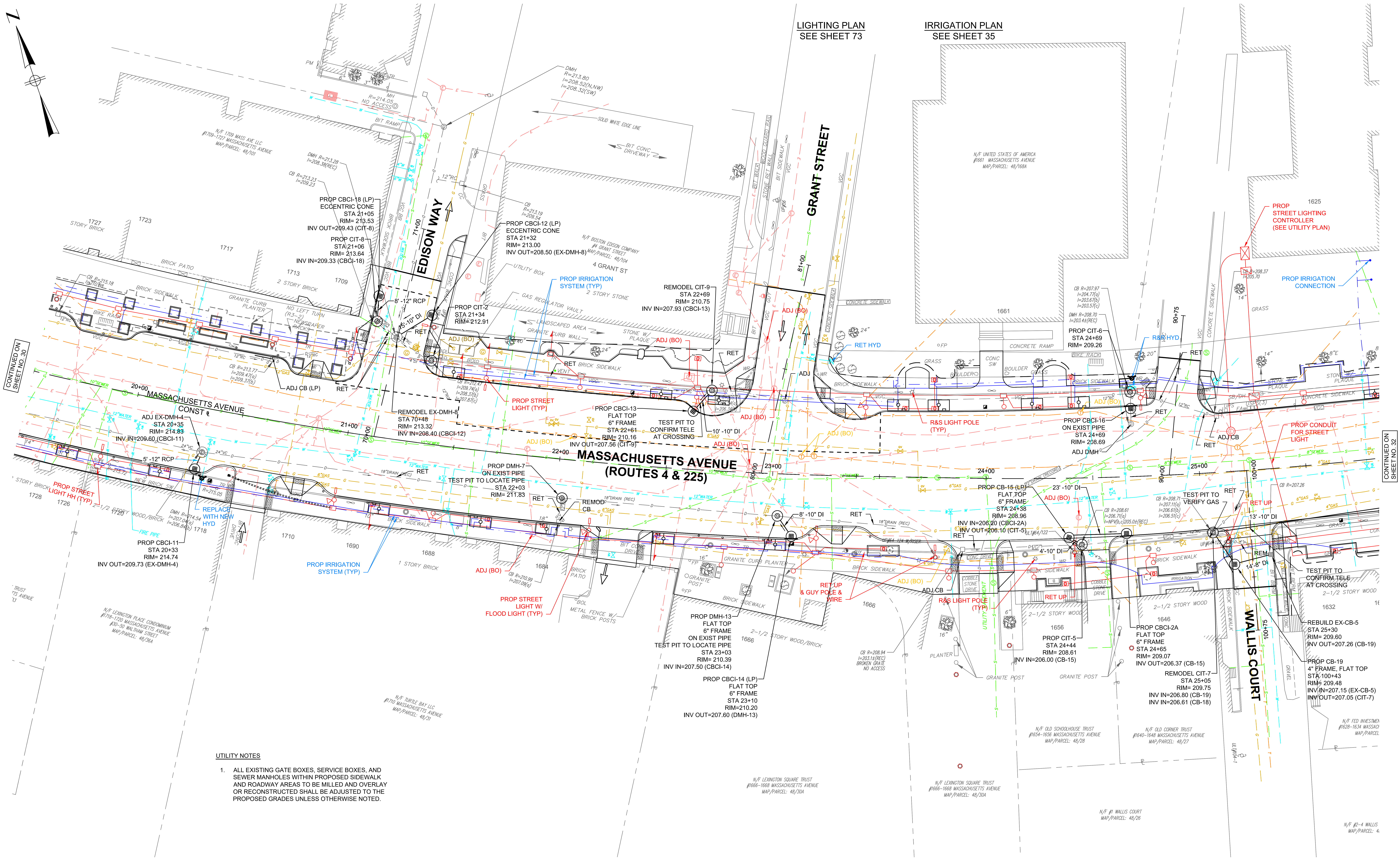
TOWN CENTER IMPROVEMENTS
DRAINAGE & UTILITY PLAN
LEXINGTON, MASSACHUSETTS

BETA JOB NO. 6331

ISSUE DATE 02/05/2021

SHEET NO. 30 OF 92

2/8/2021 12:11 PM O:\6300S\6331 - LEXINGTON CENTER STREETSCAPE\DRAWING FILES\PLANSET\6331 DRAIN UTIL.DWG (BETA STB BW STB)



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DJ

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Kien Y Ho
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TOWN CENTER IMPROVEMENTS

DRAINAGE & UTILITY PLAN

LEXINGTON, MASSACHUSETTS

BETA JOB NO. 6331
ISSUE DATE 02/05/2021
SHEET NO. 31 OF 92

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LIGHTING PLAN
SEE SHEET 74
IRRIGATION PLAN
SEE SHEET 36
NOTE: ACTUAL LOCATION OF THE ELECTRICAL CONTROLLER WILL BE COORDINATED WITH THE TOWN.
PROP STREET LIGHTING CONTROLLER (SEE UTILITY PLAN)
PROP IRRIGATION CONNECTION
R&R LIGHT POLE
RET LIGHT POLE
PROP STREET LIGHT HH (TYP)
PROP IRRIGATION SYSTEM (TYP)
PROP STREET LIGHT (TYP)
IRRIGATION CONTROL VALVE
JUNCTION BOX
IRRIGATION BOX
R&R HYD
PROP CONDUIT FOR STREET LIGHT
RET UP
RET UP W/ PROP STREET LIGHT (TYP)
REPLACE WITH NEW HYD
PROP CB-18
6" FRAME
1 COURSE BRICK
STA 26+64
RIM= 210.53
INV OUT=207.90 (CIT-7)
MASSACHUSETTS AVENUE (ROUTES 4 & 225)
MASSACHUSETTS AVENUE CONST ℄
PC 26+46.6
PT 25+78.0
PT 27+80.3
25+00
26+00
27+00
28+00
29+00
30+00
90+75
90+00
100+00
100+75
WALLIS COURT
CONTINUED ON SHEET NO. 31
1625
1605
1575
1557
1646
1632
1628
1620
FIRST BAPTIST CHURCH
2-1/2 STORY WOOD
75 FT RADIO TOWER
2 FT SQ SECURITY BOX
N/F TOWN OF LEXINGTON #1575-1625 MASSACHUSETTS AVENUE MAP/PARCEL: 48/169
N/F TOWN OF LEXINGTON #1557 MASSACHUSETTS AVENUE MAP/PARCEL: 48/170A
N/F OLD CORNER TRUST #1640-1648 MASSACHUSETTS AVENUE MAP/PARCEL: 48/27
N/F FED INVESTMENT TRUST NO 1 #1628-1634 MASSACHUSETTS AVENUE MAP/PARCEL: 48/21
N/F THE WINTER STREET REALTY TRUST #1620 MASSACHUSETTS AVENUE MAP/PARCEL: 48/20
N/F FIRST BAPTIST CHURCH OF LEXINGTON #1598 MASSACHUSETTS AVENUE MAP/PARCEL: 48/19
N/F FIRST BAPTIST CHURCH #1580 MASSACHUSETTS AVENUE MAP/PARCEL: 48/18A
N/F MELENDEZ, YOUNG #1556 MASSACHUSETTS AVENUE MAP/PARCEL: 48/16
N/F #2-4 WALLIS COURT MAP/PARCEL: 48/22
CONCRETE SIDEWALK
BRICK SIDEWALK
BRICK WALK
BIT CONC DRIVEWAY
STONE RETAINING WALL
STONE RET WALL
STONE WALL
BRICK STEPS W/STONE TREAD
CONC STEPS & WALLS W/METAL HAND RAIL
GRANITE STEPS & WALLS W/METAL HAND RAILS
GRANITE STEPS
GRASS
8"SEWER
12"WATER
6"GAS
4"GAS
CB R=207.26
CB R=208.71 I=207.11(a) I=206.61(b) I=206.51(c)
CB R=208.28 I=204.93(a) I=204.92(b)
CB R=208.04 I=204.79
CB R=208.30 I=203.90
CB R=208.37 I=205.70

UTILITY NOTES

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2/8/2021 12:12 PM O:\6300S\6331 - LEXINGTON CENTER STREETSCAPE\DRAWING FILES\PLANSET\6331 DRAIN UTIL.DWG (BETA STB BW.STB)

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CHECKED BY: DJ

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TOWN CENTER IMPROVEMENTS
DRAINAGE & UTILITY PLAN
LEXINGTON, MASSACHUSETTS

BETA JOB NO. 6331
ISSUE DATE 02/05/2021
SHEET NO. 32 OF 92

INSTALL 9" X 9" GRATES IN BRICK PAVER AREAS AND NOT IN CONCRETE RAMP WALK.

AVOID LIGHT FIXTURE BASE STRUCTURE WITH SLEEVE AND LATERAL PIPING. (TYPICAL)

NOTE:
LATERAL AND MAINLINES WITH SLEEVES SHOWN FOR DRAWING CLARITY. INSTALL PIPING THROUGH SIDES OF THE PLANTERS.

TWO 3" SLS.
AVOID LIGHT FIXTURE BASE STRUCTURE WITH SLEEVE, MAINLINE AND LATERAL PIPING. (TYPICAL)

REUSE EXISTING PENETRATION OF EXTERIOR WALL. IF EXISTING PENETRATION IS NOT LARGE ENOUGH, REAM EXISTING HOLE TO ACCOMMODATE 1.5-INCH TYPE K COPPER PIPE. WATERPROOF WALL PENETRATION WITH NON-SHRINK GROUT OR SILICONE CAULKING. NEW LOW VOLTAGE CONTROL WIRING SHALL PENETRATE BUILDING WALL USING SUITABLE EXISTING CONDUIT IN CLOSE PROXIMITY TO EXISTING PIPE PENETRATION.

FIELD LOCATE EXISTING IRRIGATION MAINLINE AND CONNECT TO IT.

POINT OF WATER CONNECTION, INTERIOR TO MECHANICAL ROOM, DIRECTLY DOWNSTREAM OF EXISTING 1-INCH BACKFLOW PREVENTER. INSTALL NEW 1.5-INCH COPPER PIPING FROM OUTLET OF BACKFLOW PREVENTER TO THE EXTERIOR OF THE BUILDING. INTERIOR TO THE BUILDING, PIPE SHALL BE SUPPORTED BY EXISTING CLEVIS HANGERS. INSTALL NEW MASTER VALVE AND FLOW SENSOR INTERIOR TO THE BUILDING IN NEW PIPE AS PER THE REQUIREMENTS OF THE PRODUCT MANUFACTURER.

IRRIGATION NOTES

1. COORDINATE FINAL LOCATION OF ALL DRIP TUBING, TREE STAKES AND AERATION PIPING SELECTION WITH FINAL APPROVED LANDSCAPE AND SILVA CELLS SOILS AREA.

2. ALL PIPE AND VALVE LOCATIONS ARE DIAGRAMMATIC, CONTRACTOR SHALL FIELD VERIFY.

3. ALL VALVES AND VALVE BOXES SHALL BE PLACED IN PLANTED AREAS UNDER MULCH.

4. INSTALL ALL PIPING AS FAR FROM TREES AND ROOT BALLS AS POSSIBLE WHILE MAINTAINING DRIP TUBE SPACING.

5. ALL CONTROL WIRE SHALL BE #14 GAUGE DTS FROM DECODERS TO VALVES. ALL TWO-WIRE COMMUNICATION CABLE FROM CONTROLLER TO VALVES SHALL BE POLYETHYLENE DOUBLE JACKETED OR UF-B UL PVC DOUBLE JACKETED TWO CONDUCTOR SOLID CORE BLUE, DESIGNED FOR DIRECT BURIAL. SUFFICIENT SLACK SHOULD BE LEFT IN COMMUNICATION CABLE AT ALL DECODER LOCATIONS TO BRING DECODERS ABOVE GRADE.

6. QUICK COUPLING VALVES SHALL BE INSTALLED ON 1 INCH PVC SWING JOINTS WITH BRASS INSERTS AND STABILIZERS. (SEE DETAIL)

7. IRRIGATION SYSTEM IS DESIGNED FOR SEPARATE WATER SUPPLY POINTS OF CONNECTION FROM EXISTING WATER METERS AND REDUCED PRESSURE BACKFLOW PREVENTER'S.

8. CONTRACTOR SHALL TEST DYNAMIC PRESSURE BEFORE STARTING WORK, REPORT ANY DEVIATION FROM PRESSURE REQUIRED TO OWNER'S REPRESENTATIVE BEFORE CONTINUING.

9. INSTALL CONTROLLERS ON INTERIOR WALL AS DIRECTED BY OWNER'S REPRESENTATIVE. HARD WIRE TO 120 VOLT, DEDICATED 20 AMP CIRCUIT, BUILDING POWER SUPPLY USING LICENSED ELECTRICIAN. ROUTE ALL COMMUNICATION CABLE AND RAIN SENSOR WIRE TO CONTROLLER VIA CONDUITS. (SEE DETAIL)

10. INSTALL RAIN SENSORS ON EXTERIOR BUILDING WALL WHERE DIRECTED BY OWNER'S REPRESENTATIVE. EXTERIOR RAIN SENSOR WIRING SHALL BE CONTAINED IN 1/2 INCH METALLIC CONDUIT, SECURED TO OUTSIDE OF BUILDING WALL.

IRRIGATION NOTES

11. ALL ABOVE GROUND WIRING, INSIDE AND OUTSIDE OF BUILDING, SHALL BE INSTALLED IN RIGID, METALLIC CONDUIT FOR VANDALISM PROTECTION.

12. COORDINATE LOCATION OF ALL EXISTING AND FUTURE UTILITIES ON SITE AND CONTACT PROPER AUTHORITIES AND UTILITY COMPANIES BEFORE THE START OF WORK.

13. IN-LINE DRIP TUBING TO BE INSTALLED 6" FROM ALL MASONRY WALLS, PLANTER SIDE WALLS, AND CURBING, ON AN 18" CENTER TO CENTER ROW SPACING IN THE LANDSCAPE.

14. FLUSH ALL LATERAL LINES BEFORE INSTALLING IN-LINE DRIP TUBING.

15. STAKE IN-LINE DRIP TUBING IN LANDSCAPE AT MINIMUM 5 FOOT INTERVALS TO PREVENT MOVEMENT.

16. IN-LINE DRIP TUBING TO BE INSTALLED 4" BELOW GRADE UNDER MULCH. NO DRIPPER LINE TUBING SHALL BE VISIBLE.

17. INSTALL MANUAL FLUSH PORTS AT LOWEST POINT OF EXHAUST HEADER, GENERALLY WHERE SHOWN ON THE DRAWINGS.

18. CONTRACTOR MUST SUBMIT SHOP PRODUCT DRAWINGS AS PER THE WRITTEN SPECIFICATIONS TO THE IRRIGATION CONSULTANT FOR APPROVAL PRIOR TO ORDERING MATERIAL AND BEGINNING WORK.

19. ANY AND ALL MATERIAL SUBSTITUTIONS WHICH VARY FROM THE SPECIFIED PRODUCTS MUST BE SUBMITTED TO THE IRRIGATION CONSULTANT FOR APPROVAL AS PART OF THE SUBMITTAL PROCESS.

20. ONCE APPROVED SUBMITTALS HAVE BEEN RETURNED TO THE CONTRACTOR, WORK MAY BEGIN. THE IRRIGATION CONSULTANT MUST BE NOTIFIED A MINIMUM OF 7-DAYS IN ADVANCE OF THE START OF WORK TO COORDINATE ON-SITE SUPERVISION AND ADMINISTRATION.

21. SEE IRRIGATION DETAILS AND SPECIFICATIONS SECTION FOR ADDITIONAL NECESSARY INFORMATION.

IRRIGATION LEGEND

SYMBOL	DESCRIPTION		
◉	48" DIAMETER WITH 0.6 GPH EMITTER DRIP TUBING TREE RING. USE WITH 2 GPH DEEP DRIP STAKES. CONNECT STAKE DISTRIBUTION TUBING TO A 2 GPH POINT SOURCE EMITTER AND TO A SELF PIERCING BARBED TRANSFER FITTING (PROVIDE 4 STAKES PER INDIVIDUAL STREET TREE)		
[- - - - - - -]	45	12"x18"	IN-LINE EMITTER DRIP TUBING WITH 0.6 GPH EMITTERS
- - - - - -	40	12"	IN-LINE EMITTER DRIP TUBING (IN 3" AERATION PIPE) WITH 0.9 GPH EMITTER
☒	SERVICE BOX WITH GRATED COVER FOR AERATION/DRIP PIPE MAINTENANCE		
⧓	1-1/4" ISOLATION GATE VALVE		
◪	1" QUICK COUPLING VALVE		
Ⓕ	MANUAL FLUSHING VALVE		
◐◀	1" 24 VOLT ELECTRIC ZONE VALVE WITH DISK FILTER (SEE VALVE DESIGNATOR FOR FLOWS)		
——	CLASS-200 PVC LATERAL PIPING (SEE LATERAL PIPE SCHEDULE)		
—·—·—	1-1/4" SCHEDULE 40 PVC MAINLINE PIPING		
━·━·━	1-1/2" TYPE K COPPER PIPE		
═ ═ ═ ═	CLASS-160 PVC PIPE SLEEVE (SIZE AS INDICATED) INSTALL SCH-40 PVC WIRE CONDUIT ADJACENT TO ALL MAINLINE PIPE SLEEVES, MINIMUM WIRE CONDUIT SIZE TO BE 1-1/2-INCH. SEE SLEEVING DETAIL.		

IRRIGATION LEGEND

SYMBOL	DESCRIPTION
MI	MOISTURE SENSOR
R	AUTOMATIC WIRELESS RAIN SENSOR, ONE FOR EACH CONTROLLER
⟨A⟩ ⟨B⟩	AUTOMATIC INDOOR MOUNT CONTROLLER
LA/G	LIGHTING SURGE WITH GROUND
⊖	MASTER VALVE AND FLOW METER, EACH WATER SOURCE LOCATIONS

ABBREVIATION:

2"SL.
SIZE OF SLEEVE INCH
SLEEVE
ELEC. = ELECTRICAL
SS = SILVA CELL

VALVE DESIGNATION:

A1 5 / 1"
CONTROLLER
STATION NUMBER
FLOW GPM
CONTROL VALVE SIZE

LATERAL PIPE SCHEDULE

FLOW	PIPE SIZE / TYPE
0-12 GPM	1 INCH 100 PSI POLYETHYLENE OR CLASS-200 PVC

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NUMBER	DATE	MADE BY	CHECKED BY	REVISIONS

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DESIGNED BY: GD
CHECKED BY: JB

REGISTERED PROFESSIONAL
JEFFREY R. BOWMAN 003634

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TITLE
TOWN CENTER IMPROVEMENTS
IRRIGATION PLAN
LEXINGTON, MASSACHUSETTS

BETA JOB NO. 6331
ISSUE DATE 2/05/2021
SHEET NO. 33 OF 92

1/20/2021 3:40 PM K:\BETA GROUP\LEXINGTON STREETSCAPE\11 100%CD\6331_IRRIGATION-1.DWG (BETA STB BW.STB)

COORDINATE 9" X 9" GRATE WITH LIGHTING CONDUIT BETWEEN HANDHOLE AND LIGHT FIXTURE.

AVOID LIGHT FIXTURE BASE STRUCTURE WITH SLEEVE AND MAINLINE PIPING. (TYPICAL)

NOTE:
LATERAL AND MAINLINES WITH SLEEVES SHOWN FOR DRAWING CLARITY. INSTALL PIPING THROUGH SIDES OF THE PLANTERS.

INSTALL 9" X 9" GRATES IN BRICK PAVER AREAS AND NOT IN CONCRETE RAMP WALK.

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LEXINGTON, MASSACHUSETTS

BETA JOB NO. 6331
ISSUE DATE 2/05/2021
SHEET NO. 34 OF 92

1/20/2021 3:41 PM K:\BETA GROUP\LEXINGTON STREETSCAPE\11 100%CD\6331_IRRIGATION-1.DWG (BETA STB BW.STB)

MASSACHUSETTS AVENUE
ROUTES 4 & 225
(PUBLIC - VARIABLE WIDTH)
EDISON WAY
GRANT STREET
WALLIS COURT
A3 1" 7 SC
A1 1" 2 TREES
A2 1" 2 DRIP
B4 1" 1.5 TREES
B5 1" 3 DRIP
M1
M2
M3
M4
LA/G
2SL.
3SL.
2SL W/1" ELEC. CONDUIT
TRAVERSE POINT 20 MAG NAIL N 2987974.65 E 730256.63 EL 209.76
TRAVERSE POINT 6 DRILL HOLE N 2987911.27 E 730420.97 EL 209.37
TRAVERSE POINT 1 MAG NAIL N 2988012.83 E 729995.38 EL 213.63
TRAVERSE POINT 7 PK NAIL N 2987838.50 E 730388.91 EL 209.65
TRAVERSE POINT 18 PK NAIL N 2987876.34 E 730268.78 EL 209.89
TRAVERSE POINT 17 MAG NAIL N 2987854.56 E 730341.10 EL 209.44
BENCHMARK SQUARE CUT ON NORTHEAST CORNER OF BOTTOM STEP EL 211.54
APPROX ROW

POINT OF WATER CONNECTION FROM EXISTING METER, REDUCED PRESSURE BACKFLOW PREVENTER AND NEW CONDUIT FROM NEW CONTROLLER. COORDINATE WITH MECHANICAL, ELECTRICAL AND PLUMBING.

FIELD LOCATE EXISTING MAINLINE INSTALLED ALONG THE BUILDING FACADE. INSTALL ISOLATION GATE VALVE, QUICK COUPLER, FLOW SENSOR AND MASTER VALVE.

INSTALL MAINLINE TEE FOR NEW MAINLINE AND TIE INTO EXISTING MAINLINE. FIELD LOCATE EXISTING MAINLINE.

INSTALL 9" X 9" GRATES IN BRICK PAVER AREAS AND NOT IN CONCRETE RAMP WALK.

NOTE:
LATERAL AND MAINLINES WITH SLEEVES SHOWN FOR DRAWING CLARITY. INSTALL PIPING THROUGH SIDES OF THE PLANTERS.

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TITLE

TOWN CENTER IMPROVEMENTS

IRRIGATION PLAN

LEXINGTON, MASSACHUSETTS

BETA JOB NO. 6331
ISSUE DATE 02/05/2021
SHEET NO. 35 OF 92

1/20/2021 3:42 PM K:\BETA GROUP\LEXINGTON STREETSCAPE\11 100%CD\6331_IRRIGATION-1.DWG (BETA STB BW STB)

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JEFFREY R. BOWMAN
CERTIFIED IRRIGATION DESIGNER
003634
COMMERCIAL ★ GOLF COURSE

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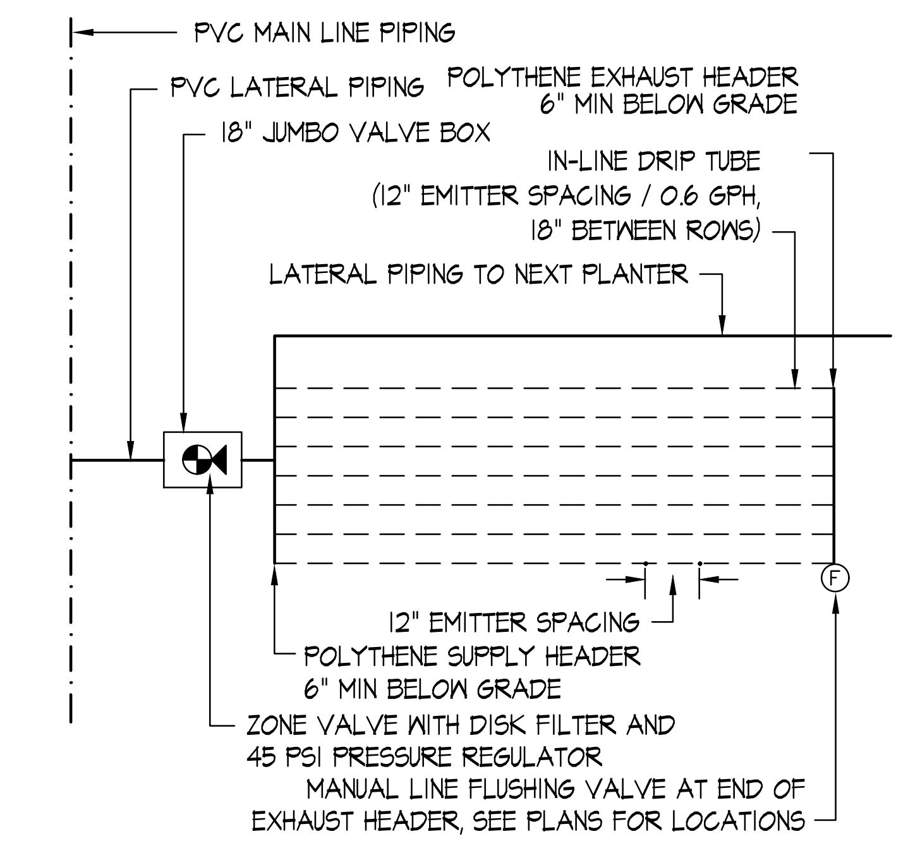
TOWN CENTER IMPROVEMENTS
IRRIGATION PLAN
LEXINGTON, MASSACHUSETTS

BETA JOB NO. 6331

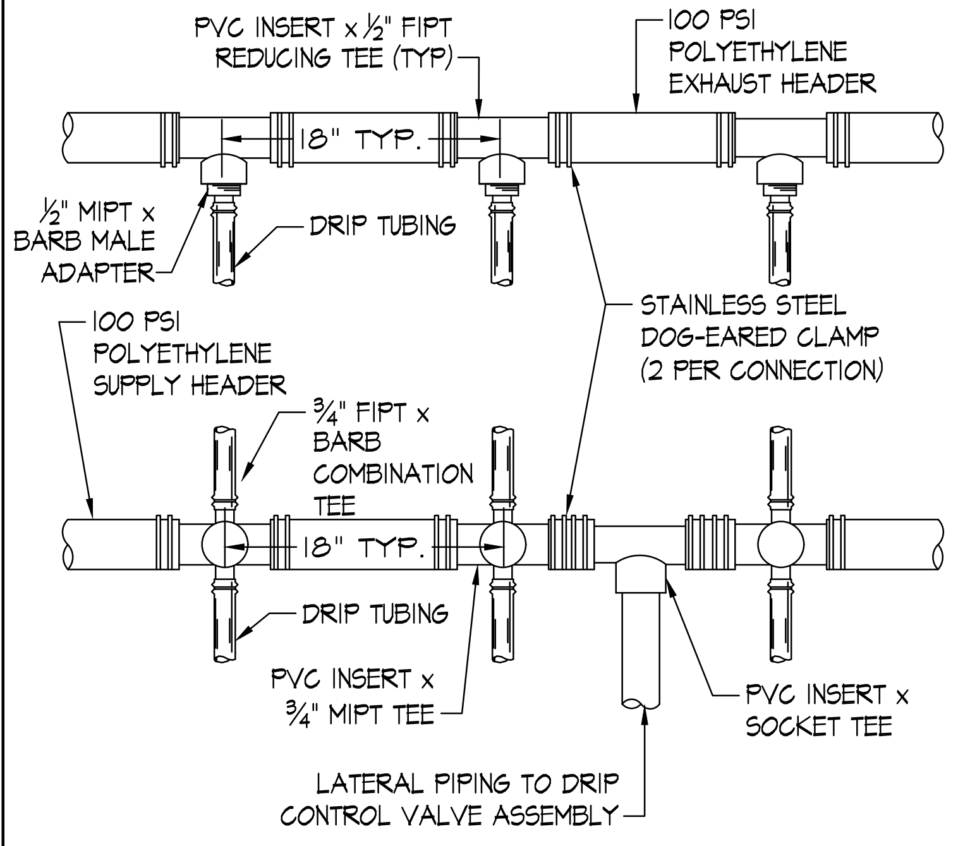
ISSUE DATE 2/05/2021

SHEET NO. 36 OF 92

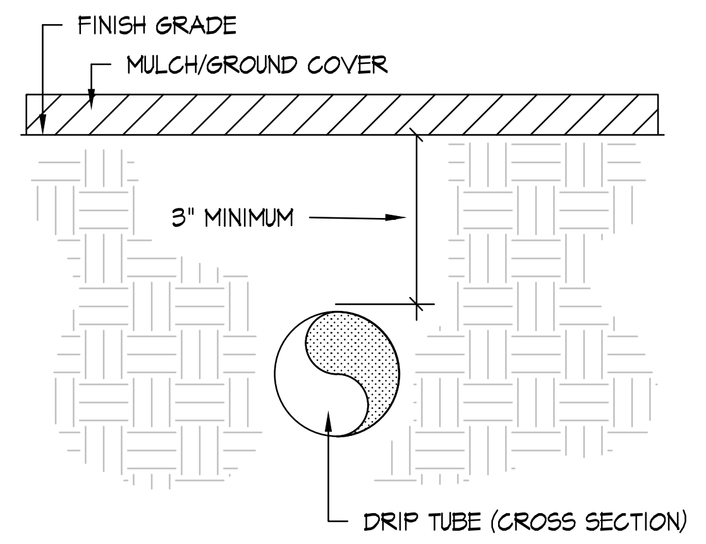
1/20/2021 3:43 PM K:\BETA GROUP\LEXINGTON STREETSCAPE\11 100%CD\6331_IRRIGATION-1.DWG (BETA STB BW.STB)


PVC MAIN LINE PIPING
PVC LATERAL PIPING
POLYTHENE EXHAUST HEADER 6" MIN BELOW GRADE
18" JUMBO VALVE BOX
IN-LINE DRIP TUBE (12" EMITTER SPACING / 0.6 GPH, 18" BETWEEN ROWS)
LATERAL PIPING TO NEXT PLANTER
F
12" EMITTER SPACING
POLYTHENE SUPPLY HEADER 6" MIN BELOW GRADE
ZONE VALVE WITH DISK FILTER AND 45 PSI PRESSURE REGULATOR
MANUAL LINE FLUSHING VALVE AT END OF EXHAUST HEADER, SEE PLANS FOR LOCATIONS

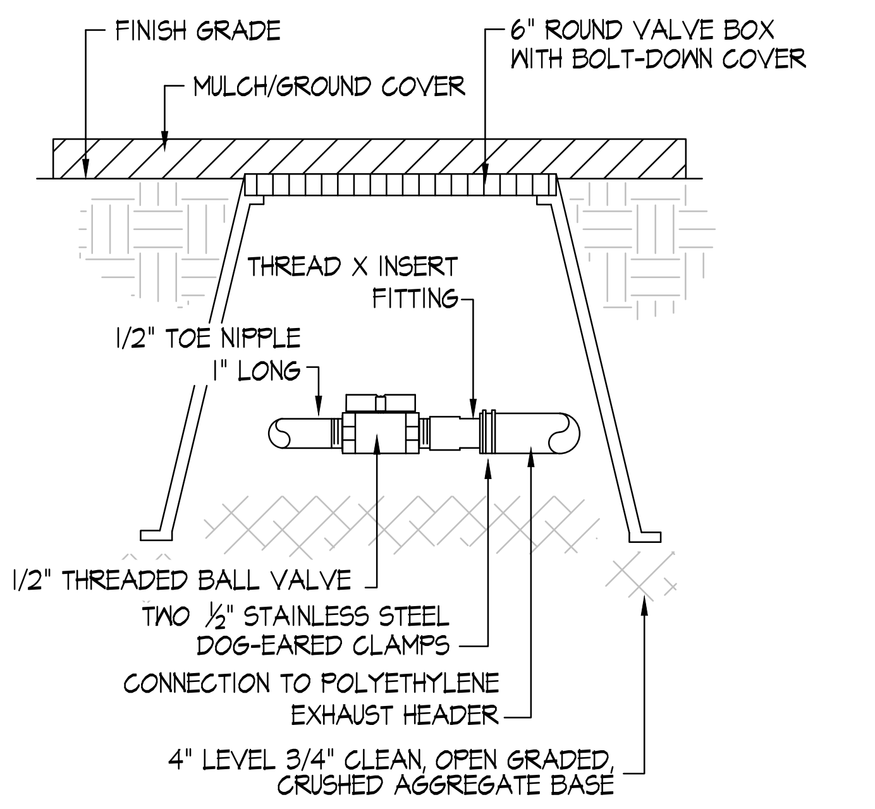
1 TYPICAL DRIP ZONE DETAIL
NO SCALE — LANDSCAPE BEDS


PVC INSERT x ½" FIPT REDUCING TEE (TYP)
100 PSI POLYETHYLENE EXHAUST HEADER
18" TYP.
½" MIPT x BARB MALE ADAPTER
DRIP TUBING
STAINLESS STEEL DOG-EARED CLAMP (2 PER CONNECTION)
100 PSI POLYETHYLENE SUPPLY HEADER
¾" FIPT x BARB COMBINATION TEE
18" TYP.
DRIP TUBING
PVC INSERT x ¾" MIPT TEE
PVC INSERT x SOCKET TEE
LATERAL PIPING TO DRIP CONTROL VALVE ASSEMBLY

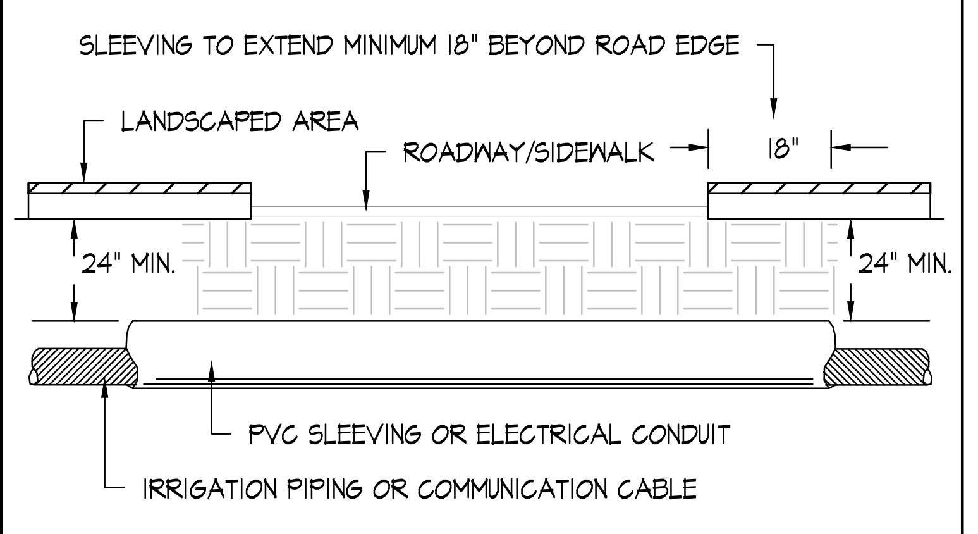
2 DRIP ZONE SUPPLY/EXHAUST HEADER DETAIL
NO SCALE



3 IN-LINE DRIP TUBE CROSS SECTION DETAIL
NO SCALE

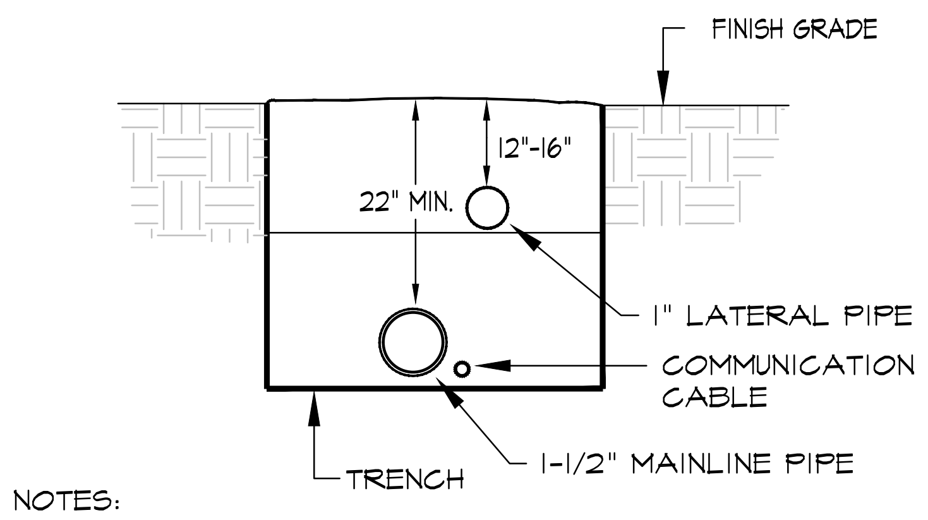

FINISH GRADE
6" ROUND VALVE BOX WITH BOLT-DOWN COVER
MULCH/GROUND COVER
THREAD X INSERT FITTING
1/2" TOE NIPPLE 1" LONG
1/2" THREADED BALL VALVE
TWO ½" STAINLESS STEEL DOG-EARED CLAMPS
CONNECTION TO POLYETHYLENE EXHAUST HEADER
4" LEVEL 3/4" CLEAN, OPEN GRADED, CRUSHED AGGREGATE BASE

4 MANUAL FLUSHING VALVE DETAIL
NO SCALE — LANDSCAPE BEDS


SLEEVING TO EXTEND MINIMUM 18" BEYOND ROAD EDGE
LANDSCAPED AREA
ROADWAY/SIDEWALK
18"
24" MIN.
24" MIN.
PVC SLEEVING OR ELECTRICAL CONDUIT
IRRIGATION PIPING OR COMMUNICATION CABLE

NOTE: PIPE AND CABLE TO BE INSTALLED IN SEPARATE SLEEVES ADJACENT TO EACH OTHER.

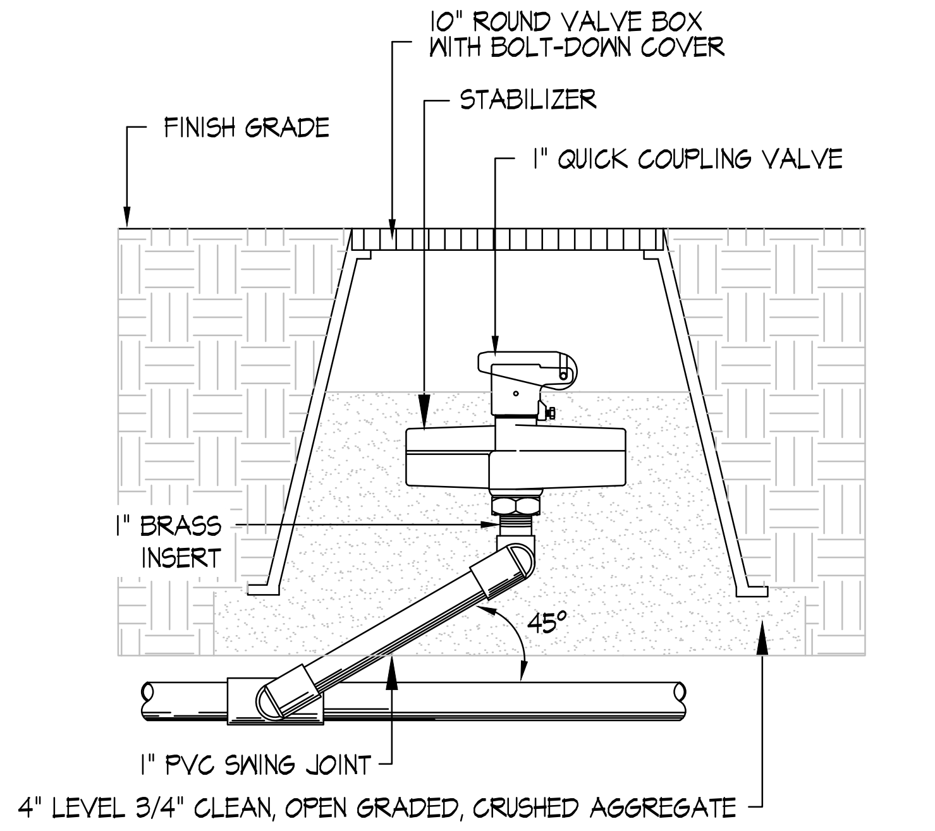
5 PIPE AND WIRE SLEEVE DETAIL
NO SCALE



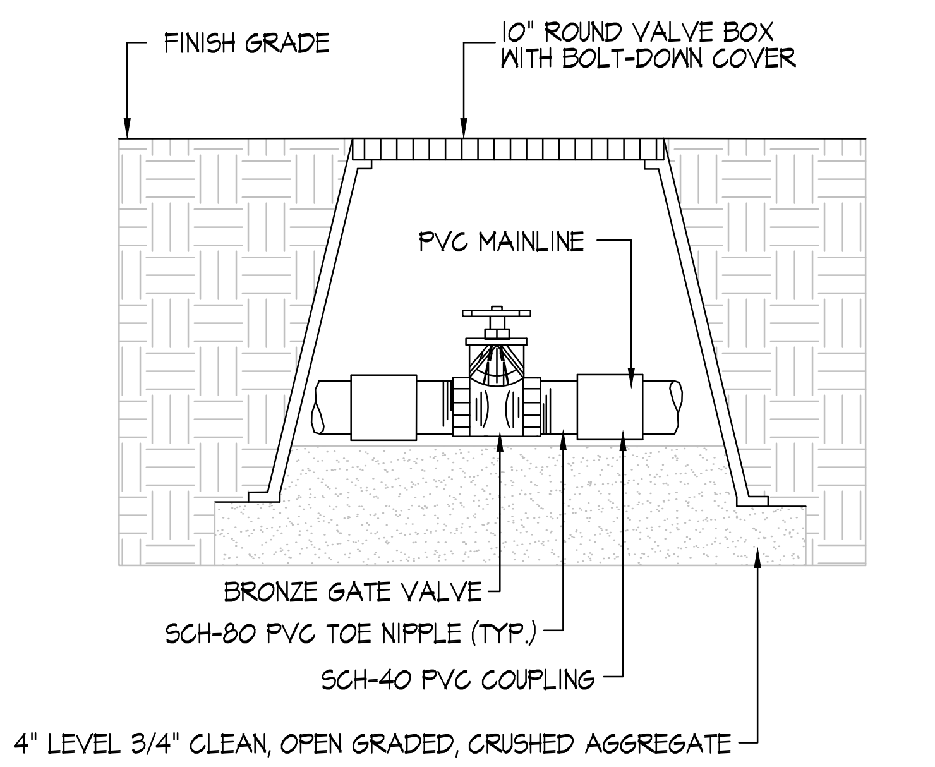
NOTES:

1. TIE LOOSE LOOP OF CABLE AT CHANGES OF DIRECTION
2. BACKFILL TRENCH WITH COMPACTED MATERIAL AS SPECIFIED FOR SPECIFIC TRENCH LOCATION. (SEE CIVIL AND LANDSCAPE DRAWINGS AND SPECIFICATIONS.)

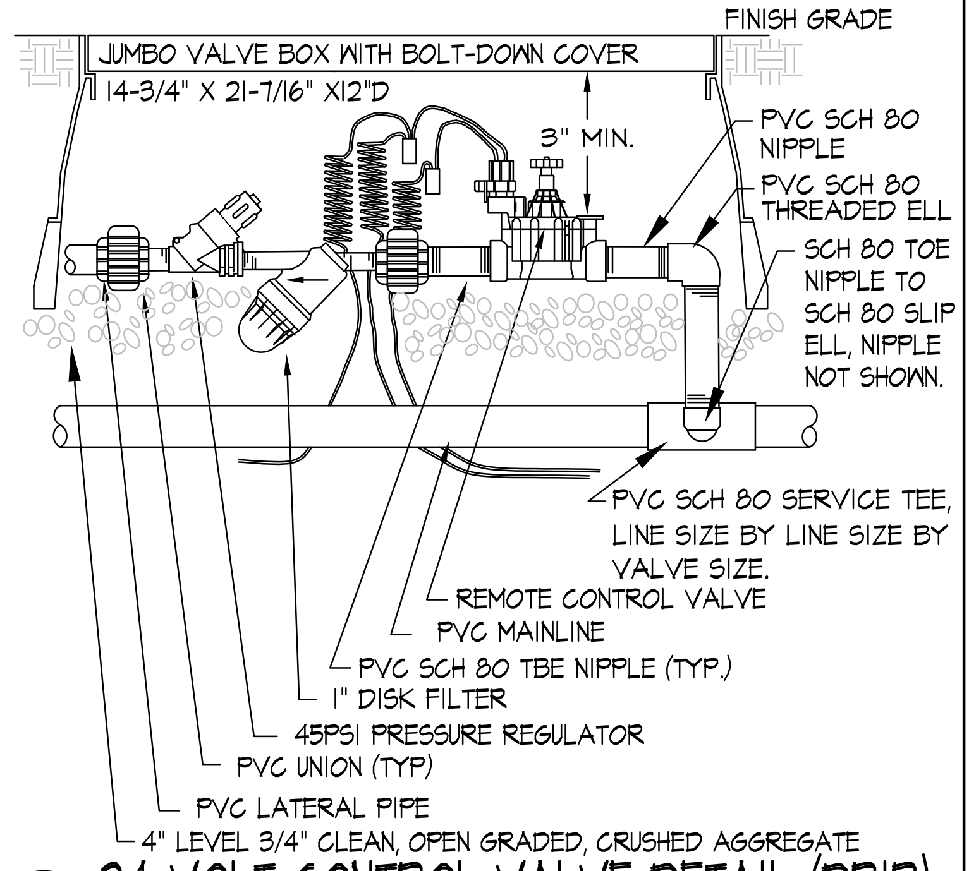
6 TRENCH AND WIRE DETAIL
NO SCALE


10" ROUND VALVE BOX WITH BOLT-DOWN COVER
STABILIZER
FINISH GRADE
1" QUICK COUPLING VALVE
1" BRASS INSERT
45°
1" PVC SWING JOINT
4" LEVEL 3/4" CLEAN, OPEN GRADED, CRUSHED AGGREGATE

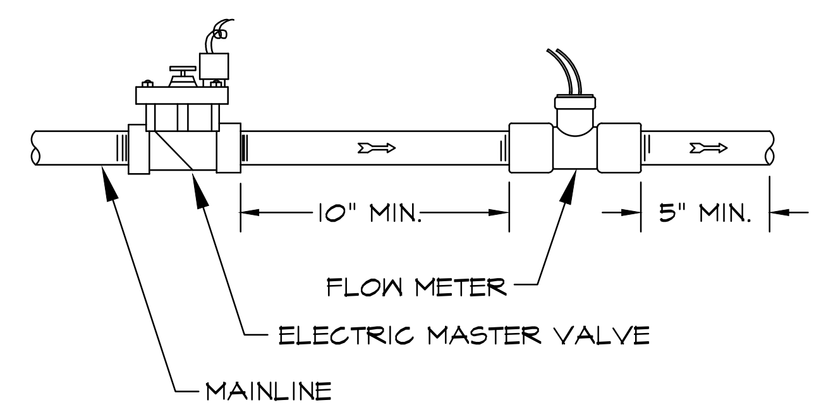
7 QUICK COUPLING VALVE DETAIL
NO SCALE


FINISH GRADE
10" ROUND VALVE BOX WITH BOLT-DOWN COVER
PVC MAINLINE
BRONZE GATE VALVE
SCH-80 PVC TOE NIPPLE (TYP.)
SCH-40 PVC COUPLING
4" LEVEL 3/4" CLEAN, OPEN GRADED, CRUSHED AGGREGATE

8 ISOLATION GATE VALVE DETAIL
NO SCALE — (1-1/2" IN SIZE)


FINISH GRADE
JUMBO VALVE BOX WITH BOLT-DOWN COVER 14-3/4" X 21-7/16" X12"D
3" MIN.
PVC SCH 80 NIPPLE
PVC SCH 80 THREADED ELL
SCH 80 TOE NIPPLE TO SCH 80 SLIP ELL, NIPPLE NOT SHOWN.
PVC SCH 80 SERVICE TEE, LINE SIZE BY LINE SIZE BY VALVE SIZE.
REMOTE CONTROL VALVE
PVC MAINLINE
PVC SCH 80 TBE NIPPLE (TYP.)
1" DISK FILTER
45PSI PRESSURE REGULATOR
PVC UNION (TYP)
PVC LATERAL PIPE
4" LEVEL 3/4" CLEAN, OPEN GRADED, CRUSHED AGGREGATE

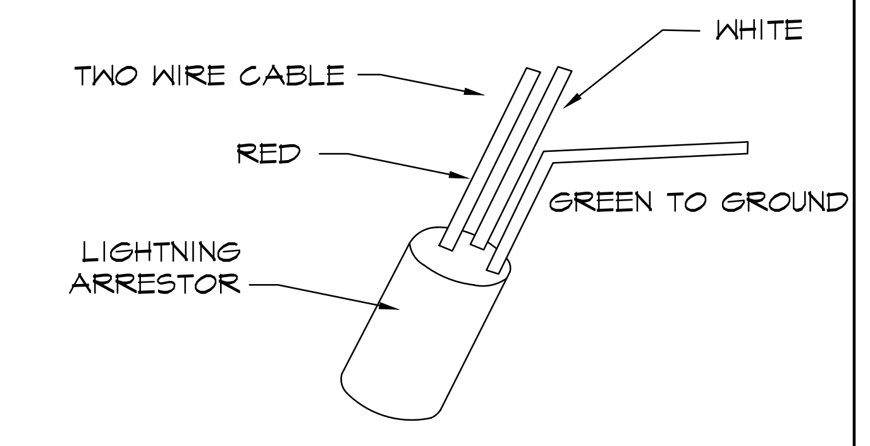
9 24-VOLT CONTROL VALVE DETAIL (DRIP)
NO SCALE — PVC PIPING



NOTE:
1. NO TURNS/BENDS IN THE PIPE WILL BE PERMITTED 10" BEFORE AND 5" AFTER THE FLOW METER ON MAINLINE.
2. INSTALL VALVE BOXES FOR MASTER VALVE AND FLOW METER AT 1625 MASSACHUSETTS AVENUE PVC PIPE MAINLINE. INSTALL MASTER AND FLOW METER INSIDE CARY MEMORIAL LIBRARY COPPER PIPE MAINLINE.

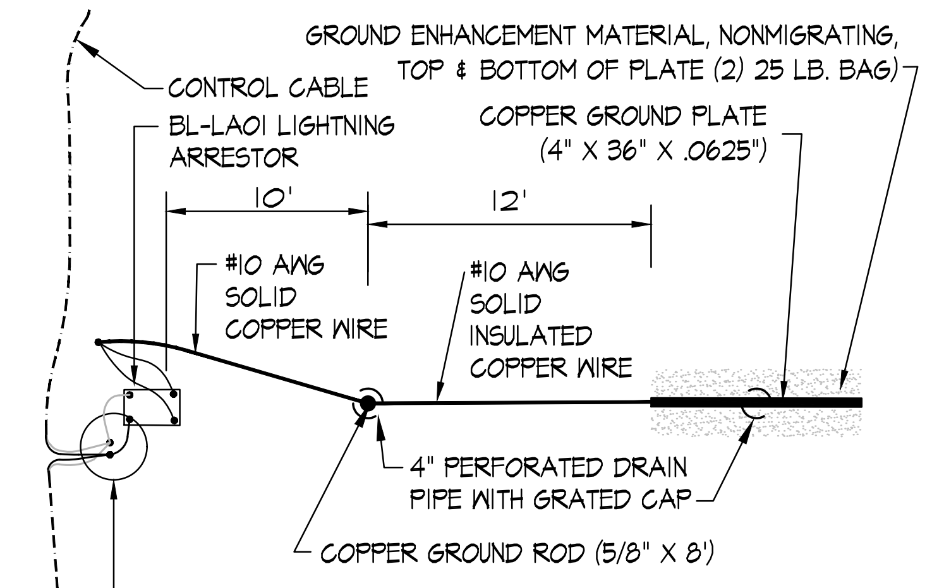
10 MASTER VALVE AND FLOW METER
NO SCALE

GROUNDING SHALL NOT EXCEED 10 OHMS FROM ANY ELECTRICAL DEVICE OR WIRE TO EARTH GROUND GROUND SHALL BE A MINIMUM OF 10 FEET FROM LIGHTNING ARRESTOR



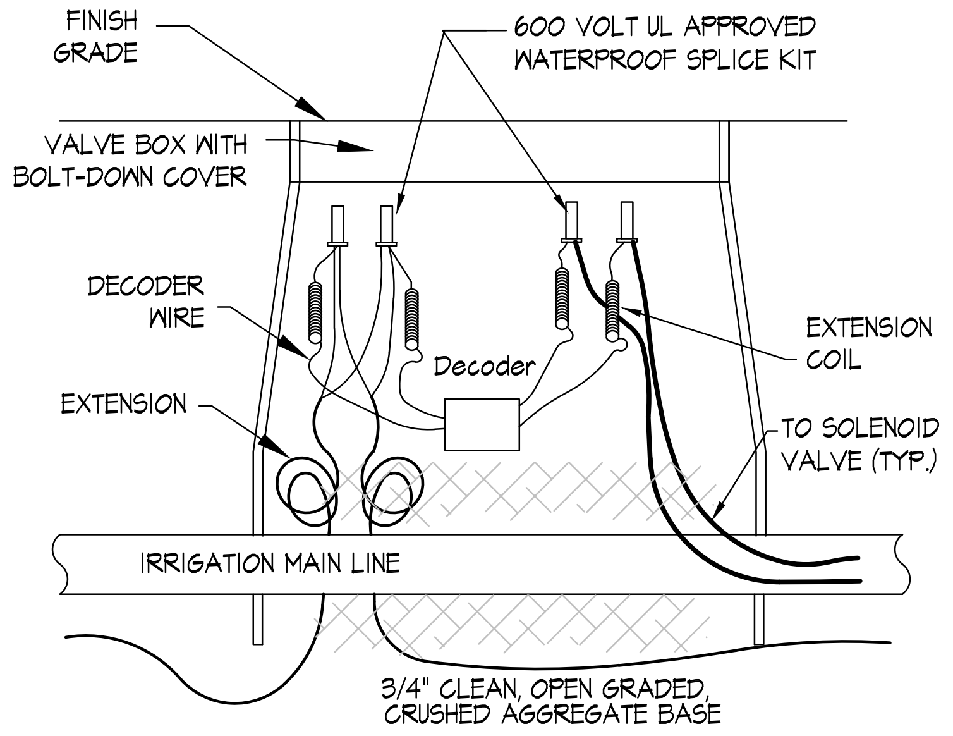
PROVIDE LIGHTNING ARRESTORS IN QUANTITIES AND SPACING AS SHOWN ON THE IRRIGATION PLAN.

11 LIGHTNING ARRESTOR DETAIL
NO SCALE

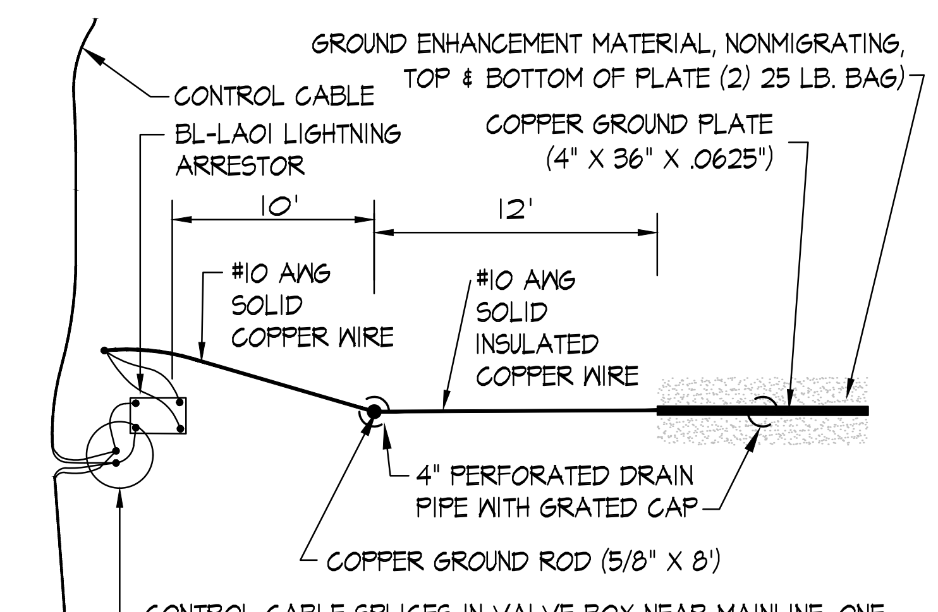

GROUND ENHANCEMENT MATERIAL, NONMIGRATING, TOP & BOTTOM OF PLATE (2) 25 LB. BAG)
CONTROL CABLE
BL-LAO1 LIGHTNING ARRESTOR
COPPER GROUND PLATE (4" X 36" X .0625")
10'
12'
#10 AWG SOLID COPPER WIRE
#10 AWG SOLID INSULATED COPPER WIRE
4" PERFORATED DRAIN PIPE WITH GRATED CAP
COPPER GROUND ROD (5/8" X 8')

CONTROL CABLE SPLICES IN VALVE BOX NEAR MAINLINE. ONE WIRE FROM SURGE DEVICE TO GROUND PLATE. RECOMMENDED GROUND RESISTANCE AT 50 OHMS OR LESS. INSTALL SURGE ARRESTER AT ALL COMMUNICATION CABLE DEAD ENDS OF TRUNK CABLE OR BRACH LINES THAT EXCEED 50 FEET. LIGHTNING ARRESTOR REQUIRED MAXIMUM EVERY 600 FT. WITH GROUND.

12 LIGHTNING ARRESTOR GROUND DETAIL
NO SCALE


FINISH GRADE
600 VOLT UL APPROVED WATERPROOF SPLICE KIT
VALVE BOX WITH BOLT-DOWN COVER
DECODER WIRE
Decoder
EXTENSION COIL
EXTENSION
TO SOLENOID VALVE (TYP.)
IRRIGATION MAIN LINE
3/4" CLEAN, OPEN GRADED, CRUSHED AGGREGATE BASE

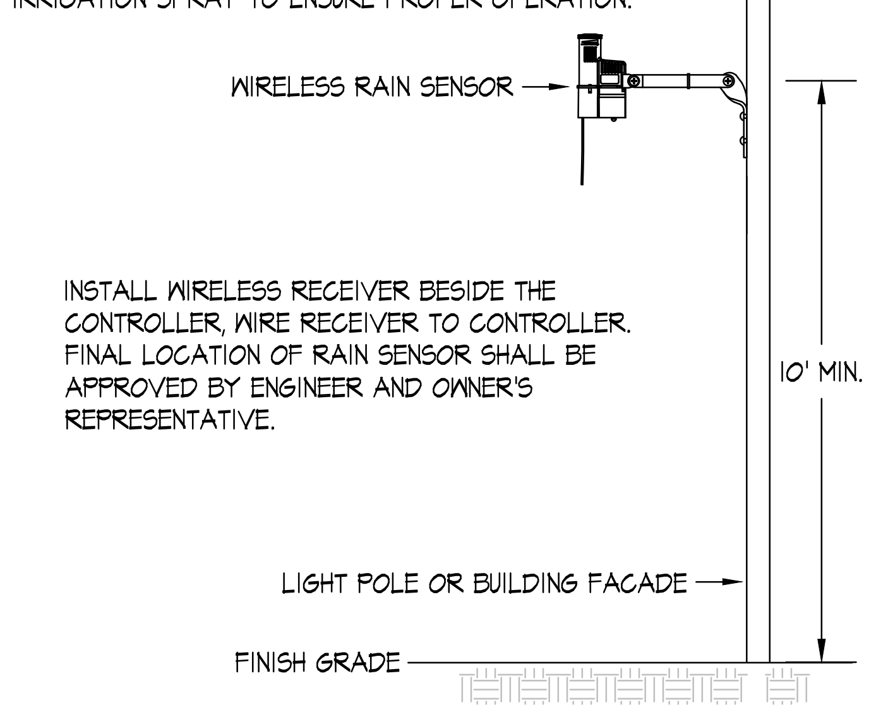
13 DECODER IN VALVE BOX DETAIL
NO SCALE


GROUND ENHANCEMENT MATERIAL, NONMIGRATING, TOP & BOTTOM OF PLATE (2) 25 LB. BAG)
CONTROL CABLE
BL-LAO1 LIGHTNING ARRESTOR
COPPER GROUND PLATE (4" X 36" X .0625")
10'
12'
#10 AWG SOLID COPPER WIRE
#10 AWG SOLID INSULATED COPPER WIRE
4" PERFORATED DRAIN PIPE WITH GRATED CAP
COPPER GROUND ROD (5/8" X 8')

CONTROL CABLE SPLICES IN VALVE BOX NEAR MAINLINE. ONE WIRE FROM SURGE DEVICE TO GROUND PLATE. RECOMMENDED GROUND RESISTANCE AT 50 OHMS OR LESS. INSTALL SURGE ARRESTER AT ALL COMMUNICATION CABLE DEAD ENDS OF TRUNK CABLE OR BRACH LINES THAT EXCEED 50 FEET. LIGHTNING ARRESTOR REQUIRED MAXIMUM EVERY 600 FT. WITH GROUND.

14 LIGHTNING ARRESTOR GROUND DETAIL
NO SCALE

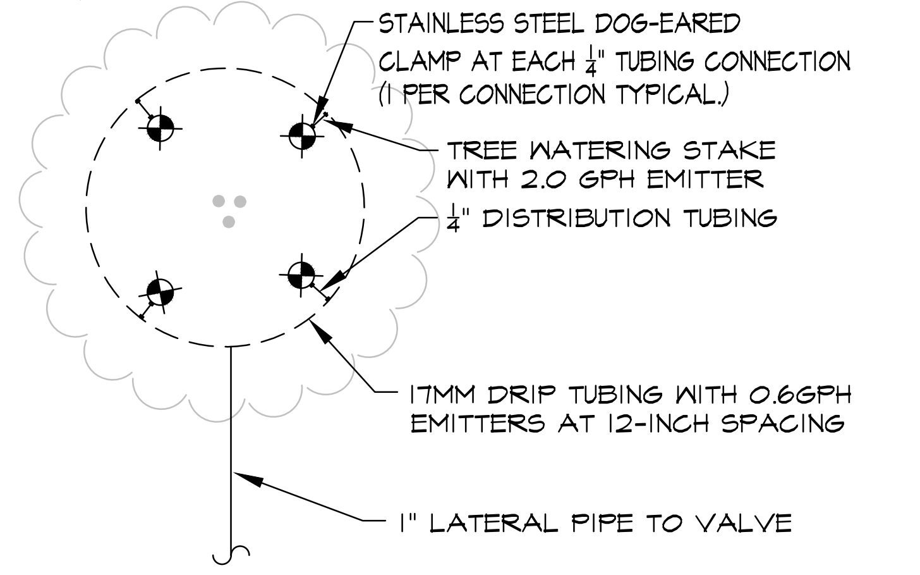
WIRELESS SENSOR TO BE INSTALLED IN CONTACT WITH THE WEATHER AND NOT IN CONTACT WITH THE IRRIGATION SPRAY TO ENSURE PROPER OPERATION.



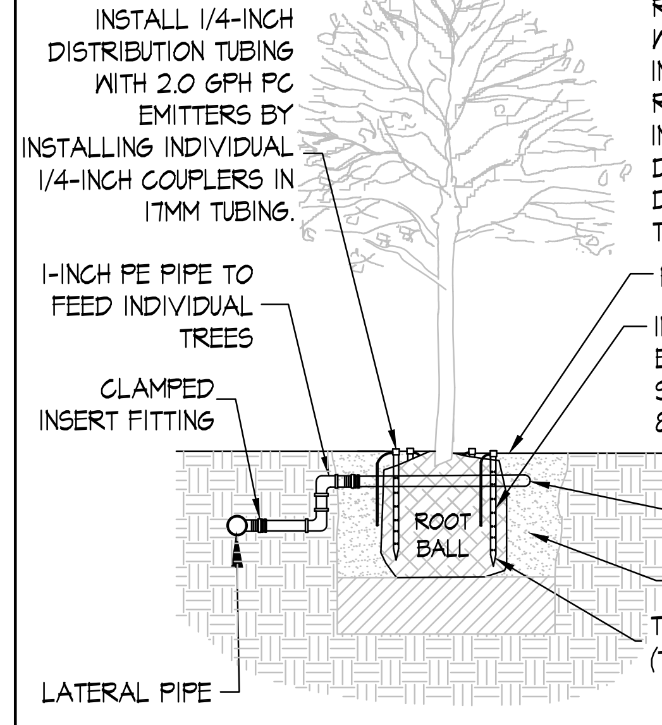
INSTALL WIRELESS RECEIVER BESIDE THE CONTROLLER, WIRE RECEIVER TO CONTROLLER. FINAL LOCATION OF RAIN SENSOR SHALL BE APPROVED BY ENGINEER AND OWNER'S REPRESENTATIVE.

15 RAIN SENSOR MOUNTING DETAIL
NO SCALE

NOTE:
TREE WATERING STAKES SHALL BE DRIVEN INTO THE ROOT BALL WITH THE CAP INSTALLED TO FINISH GRADE. ¼-INCH DISTRIBUTION TUBING SHALL BE CONNECTED TO 17MM DRIP TUBING. ¼-INCH TUBING SHALL BE INSTALLED BELOW GRADE AND INSERTED INTO THE TREE STAKE INLET. ALL TREES SHALL RECEIVE 2.0 GPH EMITTERS. TREE STAKES TO BE INSTALLED ⅔ TO ¾ BETWEEN TREE TRUNK AND EDGE OF ROOTBALL.

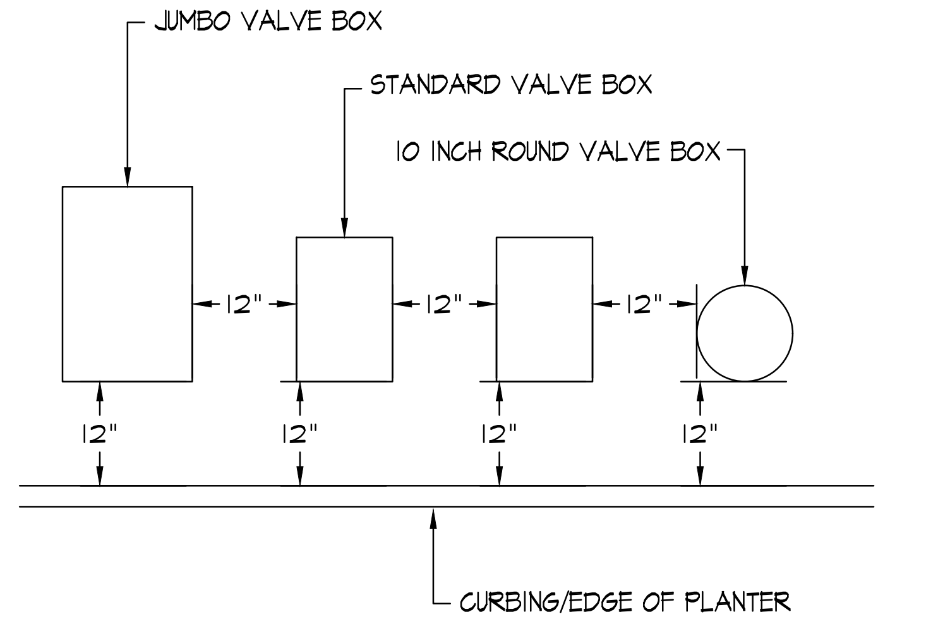

STAINLESS STEEL DOG-EARED CLAMP AT EACH ¼" TUBING CONNECTION (1 PER CONNECTION TYPICAL.)
TREE WATERING STAKE WITH 2.0 GPH EMITTER
¼" DISTRIBUTION TUBING
17MM DRIP TUBING WITH 0.6GPH EMITTERS AT 12-INCH SPACING
1" LATERAL PIPE TO VALVE

16 TREE WATERING STAKES- PLAN VIEW
NO SCALE


INSTALL 1/4-INCH DISTRIBUTION TUBING WITH 2.0 GPH PC EMITTERS BY INSTALLING INDIVIDUAL 1/4-INCH COUPLERS IN 17MM TUBING.
1-INCH PE PIPE TO FEED INDIVIDUAL TREES
CLAMPED INSERT FITTING
FINISH GRADE
INSTALL 2.0 GPH EMITTERS IN DEEP DRIP STAKES MINIMUM OF 8-INCHES BELOW CAP
ROOT BALL
DRIP RING WITH 0.6 GPH EMITTERS
PLANTING SOIL
TREE WATER STAKE (TYP.), 24-INCH DEEP
LATERAL PIPE

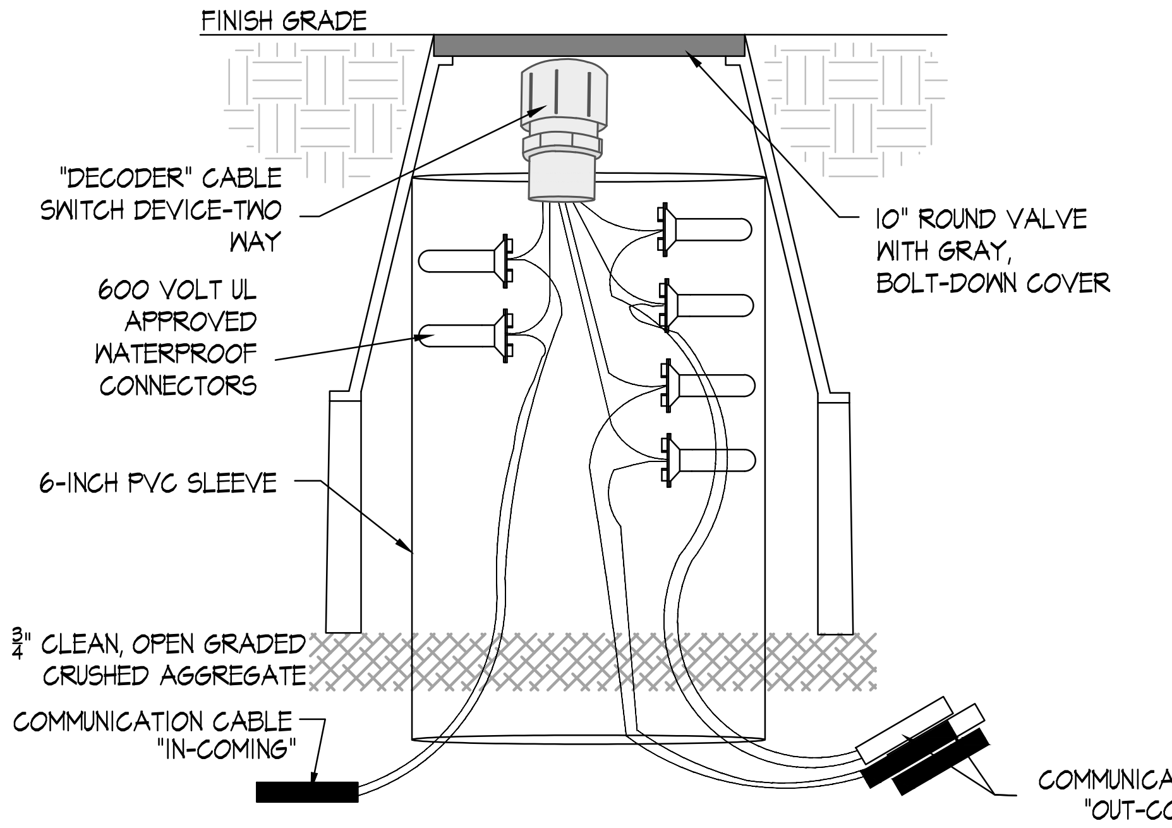
NOTE: 4 DEEP WATERING TEE STAKES. EACH TREE REQUIRES 4 DEEP WATERING STAKES. INSTALL WITH SUFFICIENT ROOM AT TOP TO INSTALL 1/4-INCH DISTRIBUTION TUBING OFF DRIP TUBING CIRCLING TREE.

17 TREE WATERING STAKES - SECTION
NO SCALE



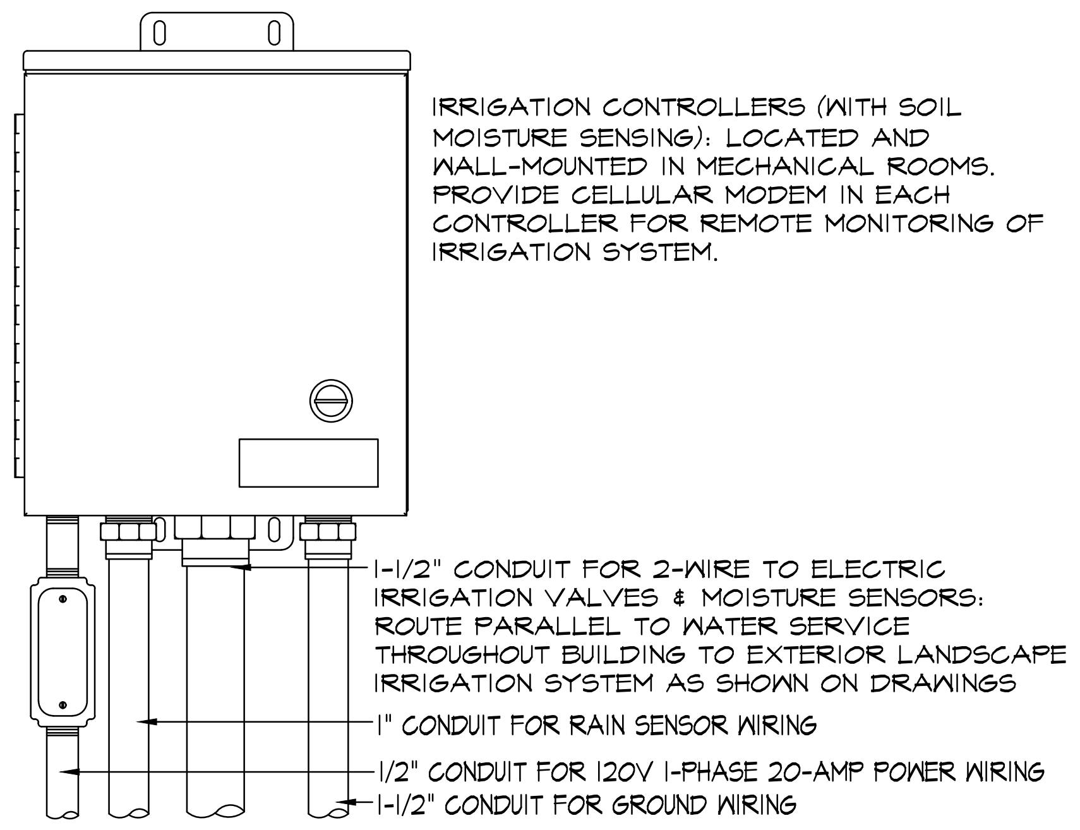
NOTE:
INSTALL ALL VALVE BOXES PERPENDICULAR TO SIDEWALK OR CURBING AS INDICATED ABOVE.

18 VALVE BOX INSTALLATION DETAIL
NO SCALE


FINISH GRADE
"DECODER" CABLE SWITCH DEVICE-TWO WAY
600 VOLT UL APPROVED WATERPROOF CONNECTORS
10" ROUND VALVE WITH GRAY, BOLT-DOWN COVER
6-INCH PVC SLEEVE
¾" CLEAN, OPEN GRADED CRUSHED AGGREGATE
COMMUNICATION CABLE "IN-COMING"
COMMUNICATION CABLE "OUT-COMING"

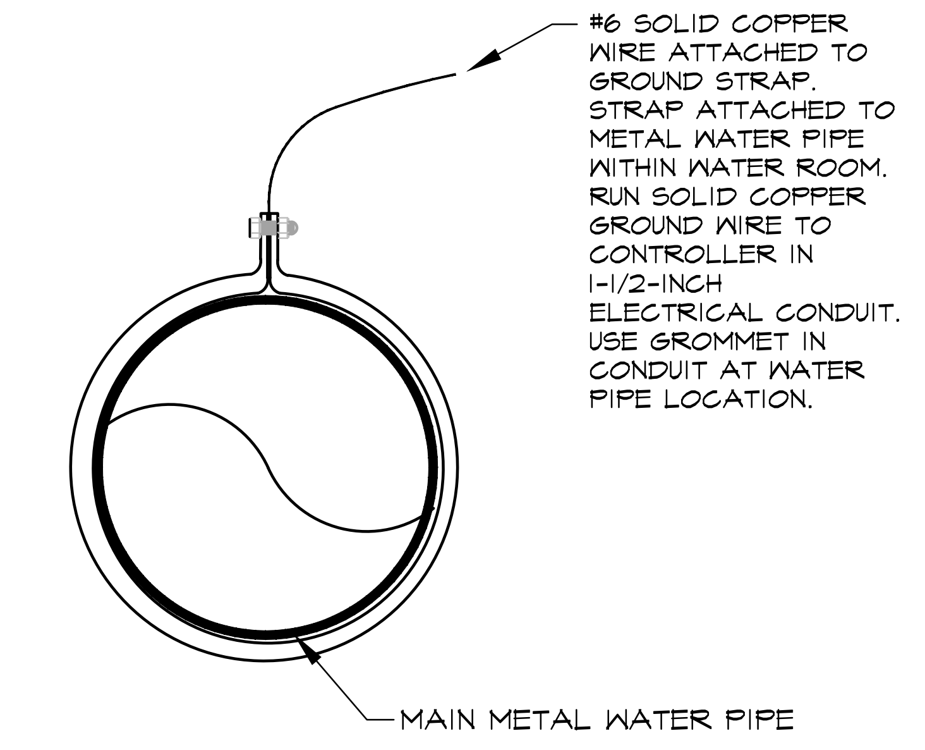
NOTE: CABLE FUSED DEVICE SHALL BE AVAILABLE IN A 2-WAY OR 3-WAY CONFIGURATION (INSTALLATION FOR TWO WAY SHOWN). DEVICE SHALL BE INSTALLED AT ALL TWO OR THREE WAY WIRE BRANCH JUNCTIONS. DEVICE MAY BE INSTALLED ON ALL LONG WIRE RUNS TO BREAK CIRCUIT IN HALF. ALL WIRES SHALL BE INSTALLED IN 600 VOLT UL APPROVED SPLICE KITS. INSIDE 10-INCH VALVE BOXES. SUFFICIENT SLACK, MINIMUM OF 48 INCHES, SHOULD BE ALLOWED TO BRING SPLICES ABOVE GRADE. CABLES SHOULD BE CLEARLY MARKED INCOMING FROM WHERE AND OUTGOING TO WHERE. CLEARLY MARK THE MILLIAMP DRAW FOR EACH LEG OF CABLE BASED ON THE NUMBER OF DEVICES DOWNSTREAM FROM THE FUSED POSITION. FUSES ARE LOCATED BENEATH DEVICE'S THREADED CAP. FUSES MAY BE PULLED OUT TO ISOLATE BRANCHES AND SECTIONS OF THE COMMUNICATION CABLE.

19 "DECODER" CABLE FUSED INSTALLATION
NO SCALE

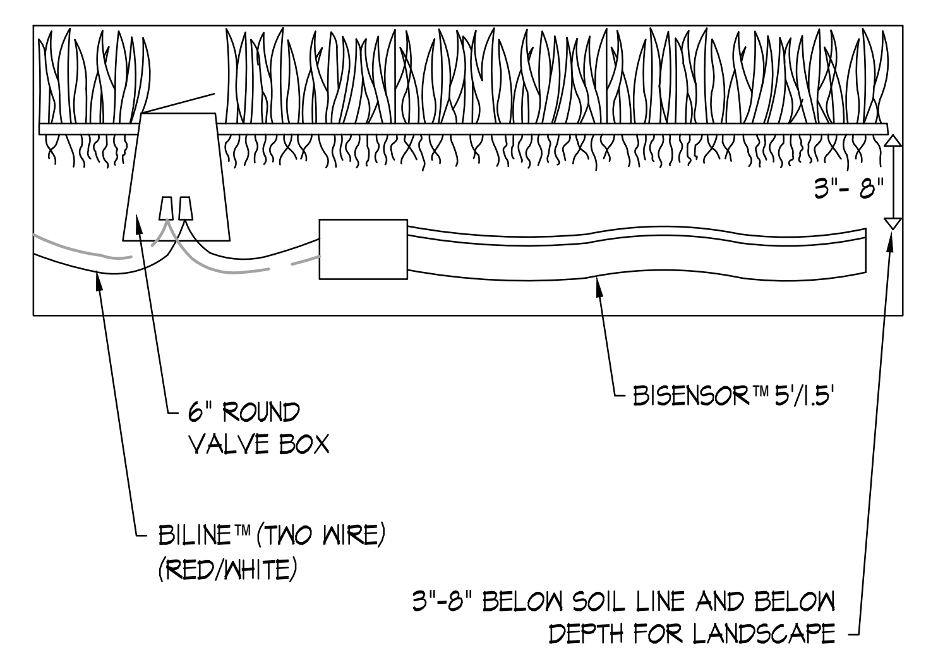

1-1/2" CONDUIT FOR 2-WIRE TO ELECTRIC IRRIGATION VALVES & MOISTURE SENSORS: ROUTE PARALLEL TO WATER SERVICE THROUGHOUT BUILDING TO EXTERIOR LANDSCAPE IRRIGATION SYSTEM AS SHOWN ON DRAWINGS
1" CONDUIT FOR RAIN SENSOR WIRING
1/2" CONDUIT FOR 120V 1-PHASE 20-AMP POWER WIRING
1-1/2" CONDUIT FOR GROUND WIRING

IRRIGATION CONTROLLERS (WITH SOIL MOISTURE SENSING): LOCATED AND WALL-MOUNTED IN MECHANICAL ROOMS. PROVIDE CELLULAR MODEM IN EACH CONTROLLER FOR REMOTE MONITORING OF IRRIGATION SYSTEM.

20 SOIL MOISTURE CONTROLLER
NO SCALE


#6 SOLID COPPER WIRE ATTACHED TO GROUND STRAP. STRAP ATTACHED TO METAL WATER PIPE WITHIN WATER ROOM. RUN SOLID COPPER GROUND WIRE TO CONTROLLER IN 1-1/2-INCH ELECTRICAL CONDUIT. USE GROMMET IN CONDUIT AT WATER PIPE LOCATION.
MAIN METAL WATER PIPE

21 CONTROLLER GROUNDING
NO SCALE


3"- 8"
BISENSOR™ 5'/1.5'
6" ROUND VALVE BOX
BILINE™ (TWO WIRE) (RED/WHITE)
3"-8" BELOW SOIL LINE AND BELOW DEPTH FOR LANDSCAPE

22 BISENSOR DETAIL
NO SCALE

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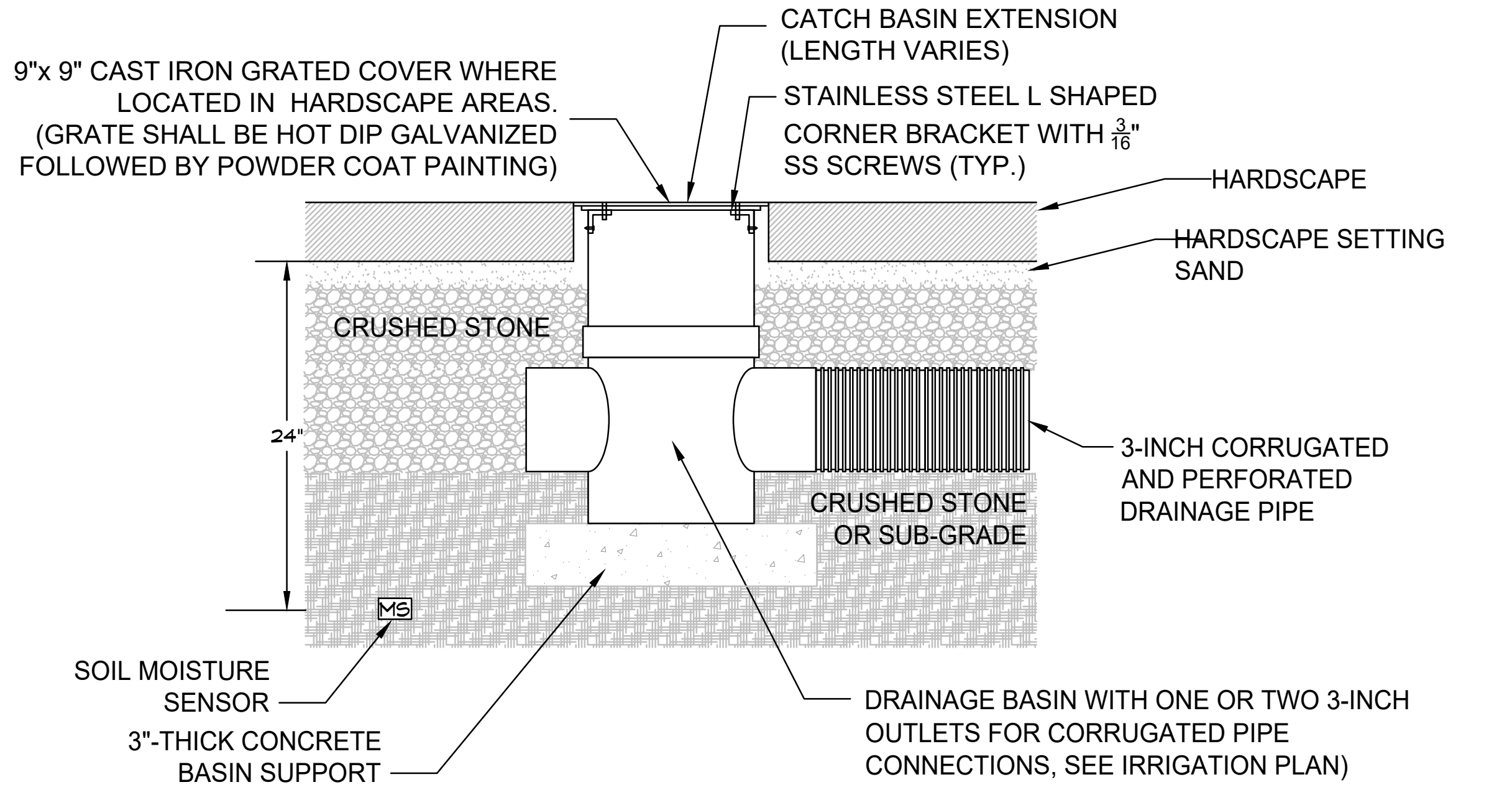
TITLE
TOWN CENTER IMPROVEMENTS
IRRIGATION DETAILS
LEXINGTON, MASSACHUSETTS

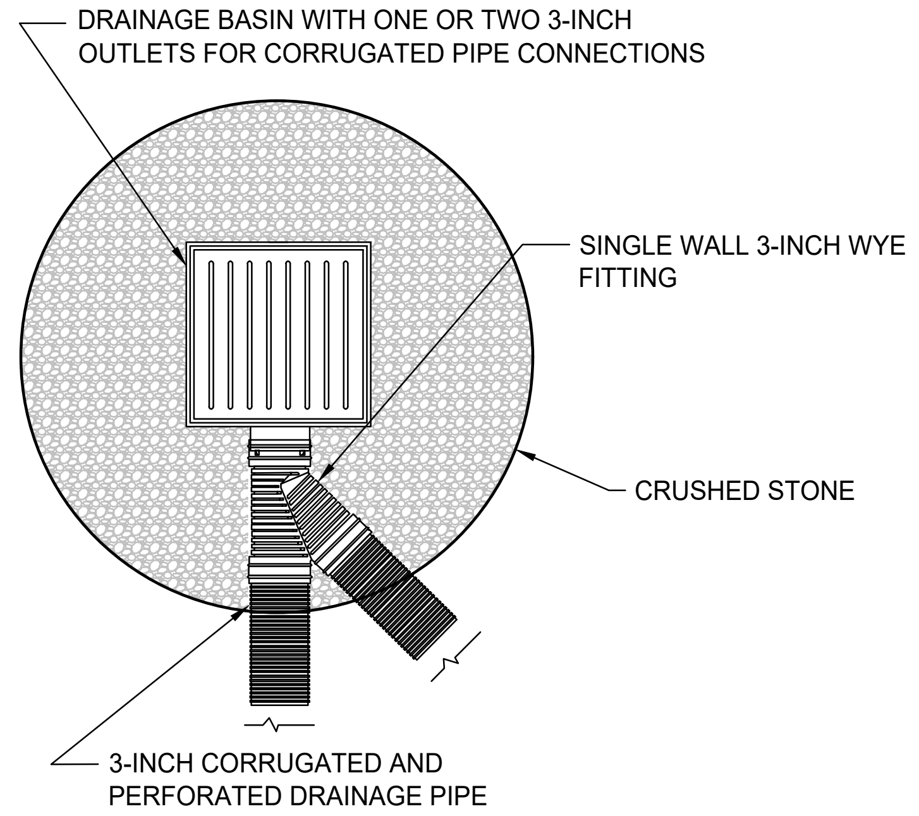
BETA JOB NO. 6331
ISSUE DATE 1/22/2021
SHEET NO. 37 OF 92

1/20/2021 3:35 PM K:\BETA GROUP\LEXINGTON STREETSCAPE\11 100%CD\6331_IRRIGATION_DETAILS-1.DWG (BETA STB BW STB)


CATCH BASIN EXTENSION
(LENGTH VARIES)
9"x 9" CAST IRON GRATED COVER WHERE LOCATED IN HARDSCAPE AREAS. (GRATE SHALL BE HOT DIP GALVANIZED FOLLOWED BY POWDER COAT PAINTING)
STAINLESS STEEL L SHAPED CORNER BRACKET WITH $\frac{3}{16}$" SS SCREWS (TYP.)
HARDSCAPE
HARDSCAPE SETTING SAND
CRUSHED STONE
24"
3-INCH CORRUGATED AND PERFORATED DRAINAGE PIPE
CRUSHED STONE OR SUB-GRADE
MS
SOIL MOISTURE SENSOR
3"-THICK CONCRETE BASIN SUPPORT
DRAINAGE BASIN WITH ONE OR TWO 3-INCH OUTLETS FOR CORRUGATED PIPE CONNECTIONS, SEE IRRIGATION PLAN)

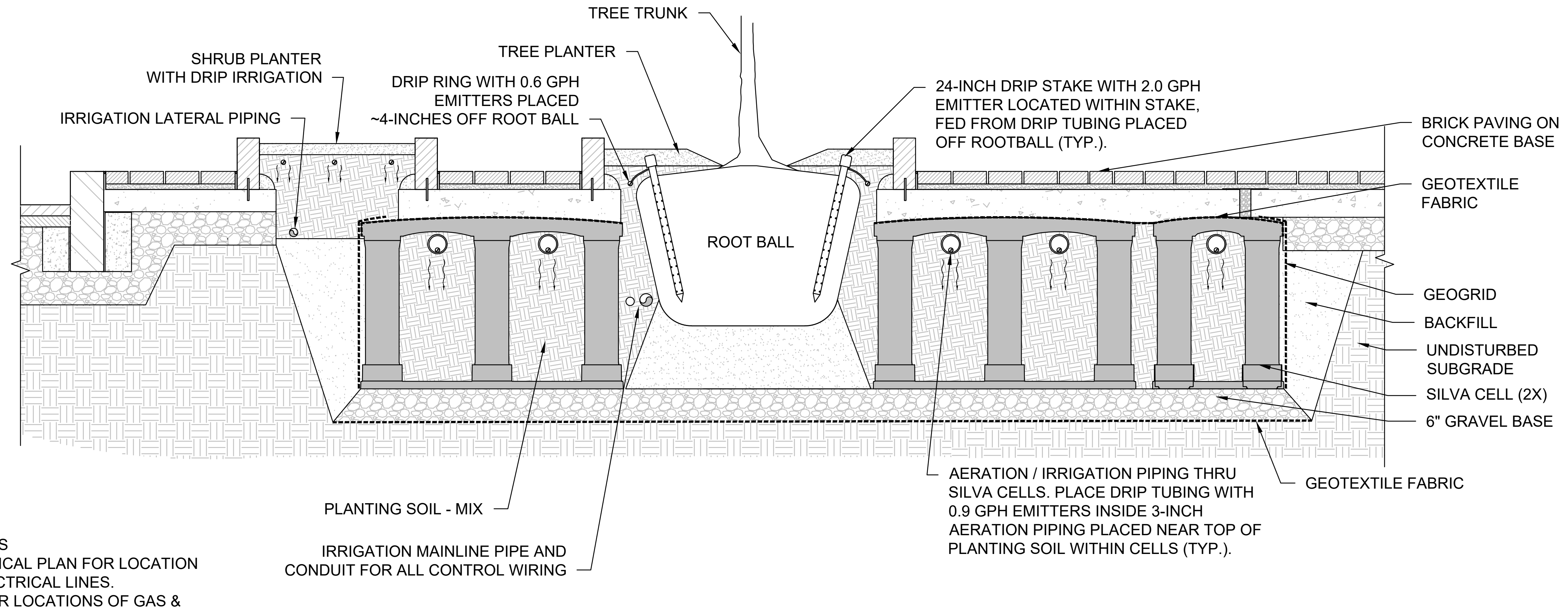
1 AERATION GRATE/IRRIGATION SERVICE RISER - SECTION VIEW

NO SCALE


DRAINAGE BASIN WITH ONE OR TWO 3-INCH OUTLETS FOR CORRUGATED PIPE CONNECTIONS
SINGLE WALL 3-INCH WYE FITTING
CRUSHED STONE
3-INCH CORRUGATED AND PERFORATED DRAINAGE PIPE

2 DRAINAGE BASIN WITH WYE FITTING - PLAN VIEW

NO SCALE


TREE TRUNK
TREE PLANTER
SHRUB PLANTER WITH DRIP IRRIGATION
IRRIGATION LATERAL PIPING
DRIP RING WITH 0.6 GPH EMITTERS PLACED ~4-INCHES OFF ROOT BALL
24-INCH DRIP STAKE WITH 2.0 GPH EMITTER LOCATED WITHIN STAKE, FED FROM DRIP TUBING PLACED OFF ROOTBALL (TYP.).
BRICK PAVING ON CONCRETE BASE
GEOTEXTILE FABRIC
ROOT BALL
GEOGRID
BACKFILL
UNDISTURBED SUBGRADE
SILVA CELL (2X)
6" GRAVEL BASE
AERATION / IRRIGATION PIPING THRU SILVA CELLS. PLACE DRIP TUBING WITH 0.9 GPH EMITTERS INSIDE 3-INCH AERATION PIPING PLACED NEAR TOP OF PLANTING SOIL WITHIN CELLS (TYP.).
GEOTEXTILE FABRIC
PLANTING SOIL - MIX
IRRIGATION MAINLINE PIPE AND CONDUIT FOR ALL CONTROL WIRING

NOTES:
1. SEE LANDSCAPE PLANS
2. SEE LIGHTING/ELECTRICAL PLAN FOR LOCATION OF STREET LIGHT ELECTRICAL LINES.
3. SEE UTILITY PLANS FOR LOCATIONS OF GAS & ELECTRIC LINES.

3 STREET TREE IRRIGATION DETAIL WITH SILVA CELL - SECTION VIEW

NO SCALE

1/20/2021 3:36 PM K:\BETA GROUP\LEXINGTON STREETSCAPE\11 100%CD\6331_IRRIGATION_DETAILS-1.DWG (BETA STB BW.STB)

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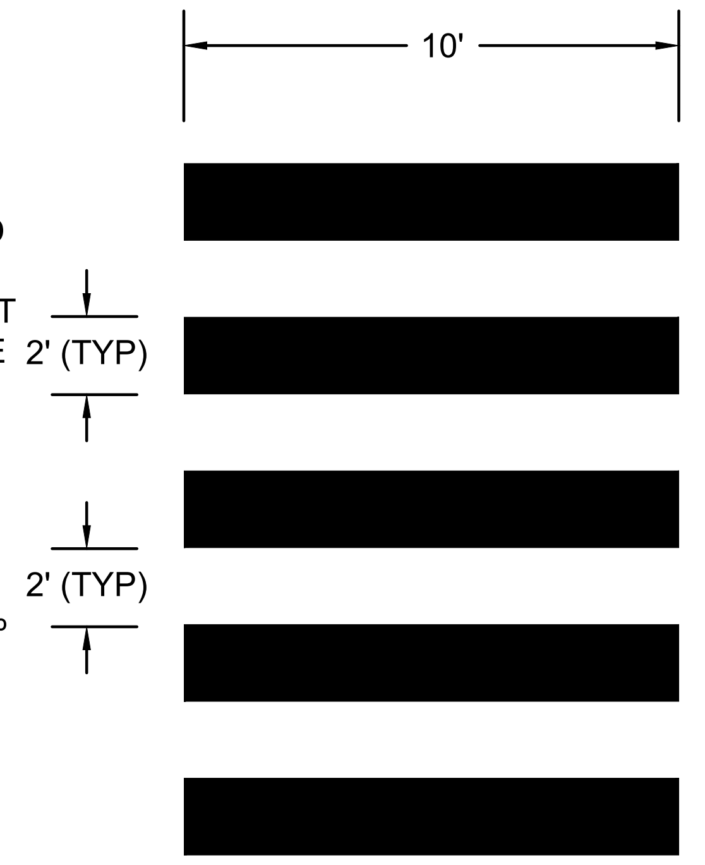
TITLE
TOWN CENTER IMPROVEMENTS
IRRIGATION DETAILS
LEXINGTON, MASSACHUSETTS

BETA JOB NO. 6331
ISSUE DATE 1/22/2021
SHEET NO. 38 OF 92

PLACEMENT OF W11-1 AND MA-W16-19P SIGN ASSEMBLIES APPROX. 300 FEET TO THE WEST ON BOTH MASSACHUSETTS AVE AND BEDFORD STREET AS DIRECTED BY THE TOWN

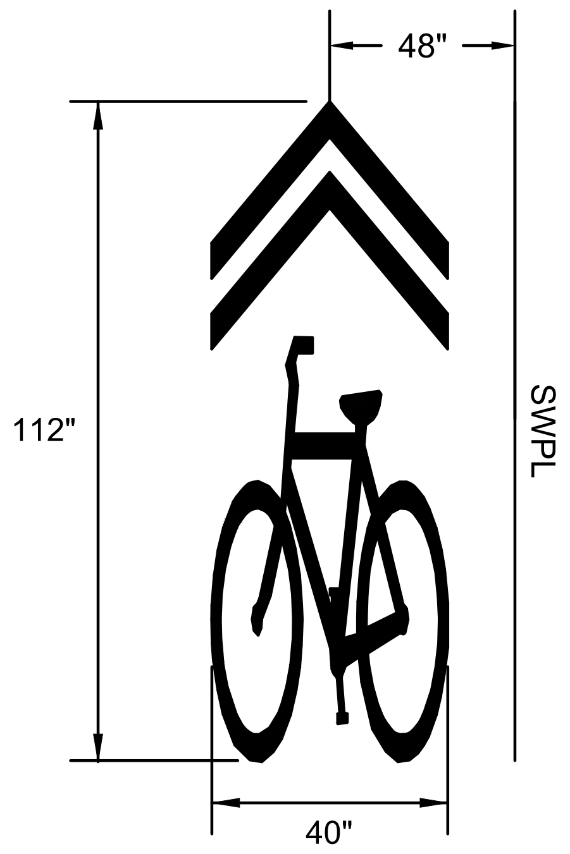
SIGN & PAVEMENT MARKING NOTES

1. ALL EXISTING SIGNS AND SIGN POSTS WITHIN THE PROJECT LIMITS SHALL BE R&D UNLESS OTHERWISE NOTED ON PLANS.
2. ALL PROPOSED PAVEMENT MARKINGS SHALL BE EPOXY. ALL EXISTING PAVEMENT MARKINGS THAT CONFLICT WITH THE PROPOSED PAVEMENT MARKINGS SHALL BE REMOVED BY AN APPROVED METHOD.
3. ALL PROPOSED SIGN POSTS SHALL BE 2 INCH ROUND ALUMINUM POSTS PAINTED BLACK.
4. UNLESS OTHERWISE PROVIDED FOR IN THE MUTCD OR MBTA BUS STOP SIGNS, ALL SIGNS SHOULD BE 90° TO THE CURB AND FACING THE FLOW OF TRAFFIC.
5. FRONT OR HEADER MBTA BUS STOP SIGNS SHALL BE INSTALLED AT A 90º ANGLE TO THE CURB, FACING THE FLOW OF TRAFFIC. REAR SIGNS SHALL BE SET AT A 60º ANGLE TO THE CURB. MBTA SIGNS SHALL BE PROVIDED & INSTALLED BY OTHERS.
6. STREET SIGNS SHALL BE MOUNTED PARALLEL WITH THE STREET.
7. ALL R&R SIGNS SHALL BE MOUNTED ON NEW POSTS UNLESS OTHERWISE NOTED.
8. SIGNS TO BE MOUNTED NEAR THE CURB LINE SHALL BE SET BACK 6" FROM THE EDGE OF THE SIGN PANEL TO THE CURB LINE. NO SIGN SHALL OVERHANG THE CURB LINE.
9. ALL SIGNS SHALL BE MOUNTED TO PROVIDE A 7' MINIMUM CLEARANCE BETWEEN THE BOTTOM OF THE SIGN AND FINISHED GRADE.
10. ADDITIVE BID FOR PAY STATION LOCATIONS AND ASSOCIATED SIGNS AND POSTS WILL BE DETERMINED IN THE FIELD BY THE ENGINEER.
11. THE SIGN & PAVEMENT MARKING PLANS REPRESENT WORK INCLUDED IN BOTH THE BASE AND ADDITIVE BIDS.



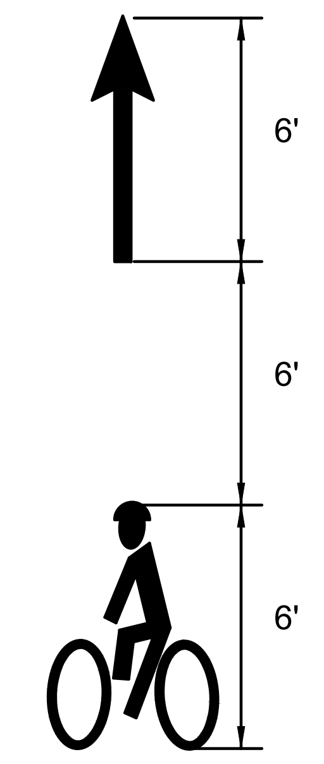
EPOXY CROSSWALK DETAIL (TYP)

NOT TO SCALE



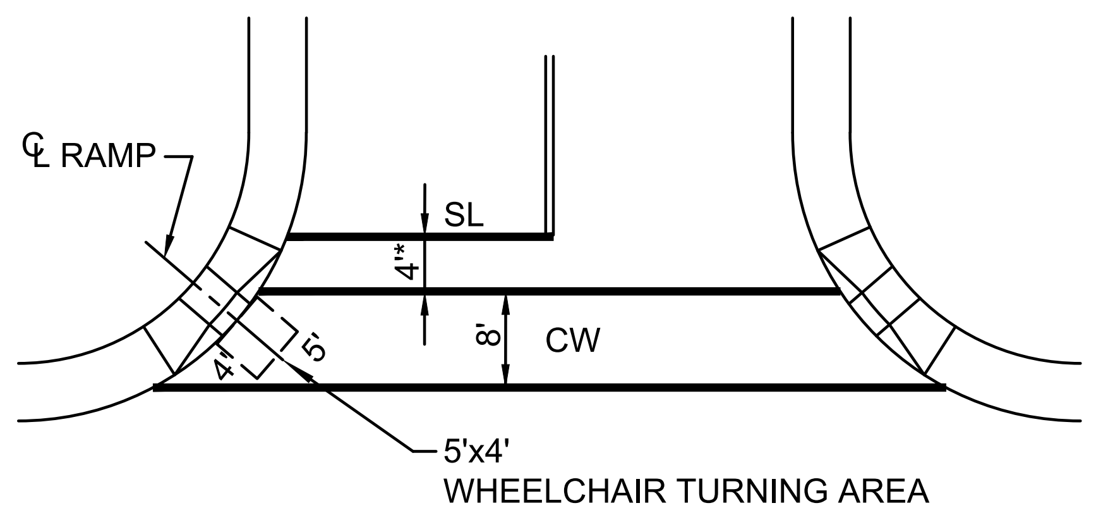
SHARED LANE MARKING DETAIL

NOT TO SCALE



BICYCLE LANE MARKING DETAIL

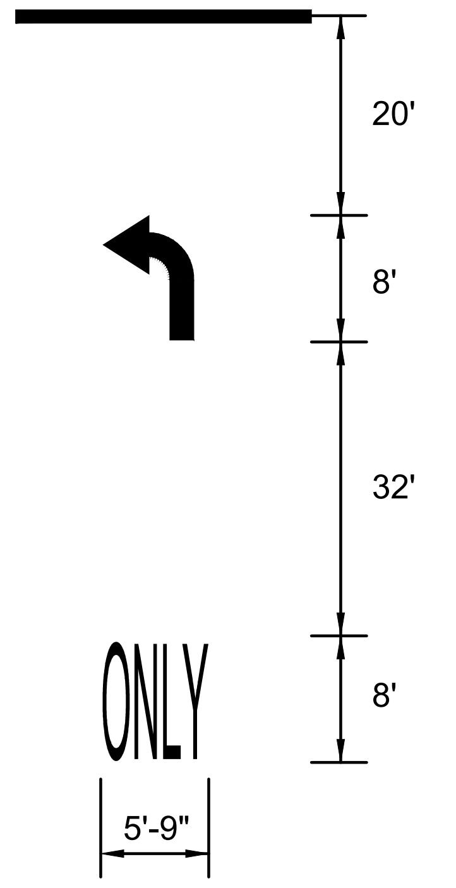
NOT TO SCALE



CROSSWALK LOCATION DETAIL

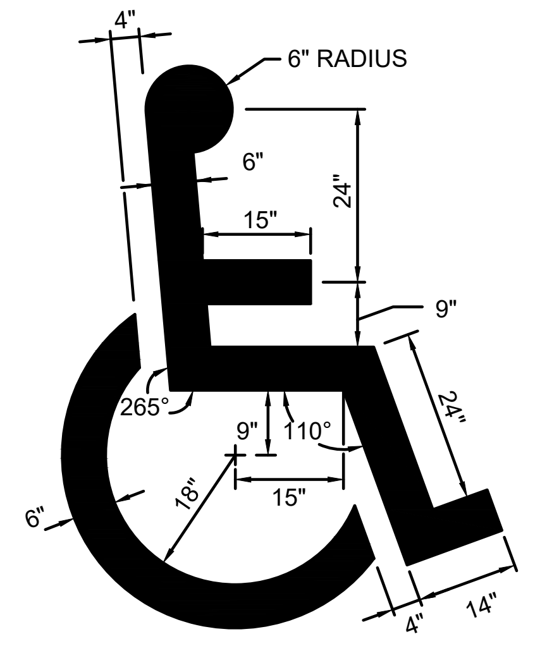
NOTE: NOT TO SCALE

*4' ON SIDE STREETS, 8' AT WALTHAM ST AND MASSACHUSETTS AVE



ARROW & "ONLY" DETAIL

NOT TO SCALE



NOTES:

1. HANDICAP SYMBOLS SHALL BE WHITE EPOXY.
2. HANDICAP SYMBOLS SHALL BE INSTALLED, ORIENTATED AS SHOWN IN EACH LOCATION AND CENTERED IN THE PARKING STALL.

DETAIL FOR HANDICAP SYMBOL PAVEMENT MARKING

NOT TO SCALE

NUMBER	DATE	MADE BY	CHECKED BY	REVISIONS

DRAWN BY: JCC

DESIGNED BY: JCC

CHECKED BY: GL

REGISTERED PROFESSIONAL

KIEN Y. HO
No. 46731
2/8/21

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20 0 20 40

SCALE IN FEET: 1"=20'

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TITLE

TOWN CENTER IMPROVEMENTS

SIGN AND PAVEMENT MARKING PLAN

LEXINGTON, MASSACHUSETTS

BETA JOB NO. 6331

ISSUE DATE 02/05/2021

SHEET NO. 39 OF 92

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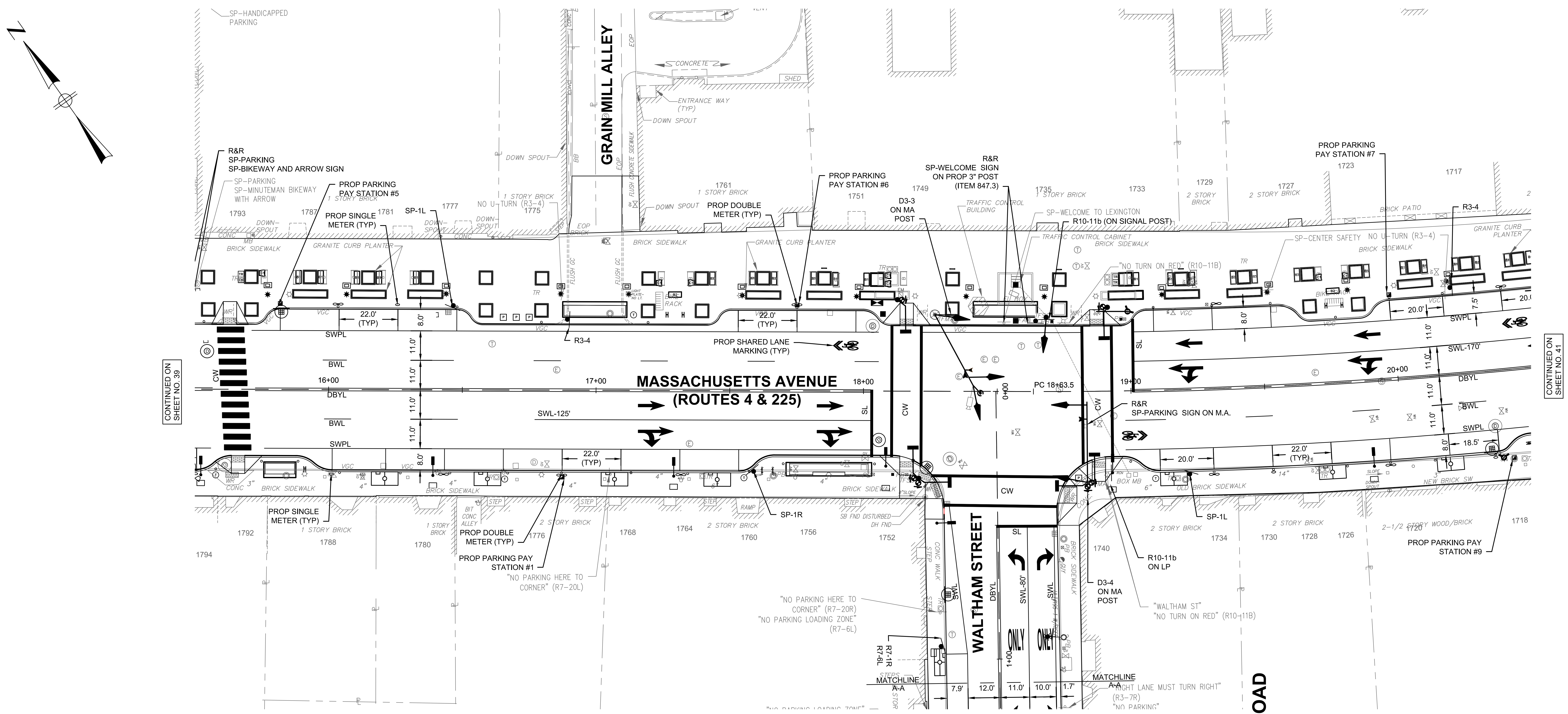

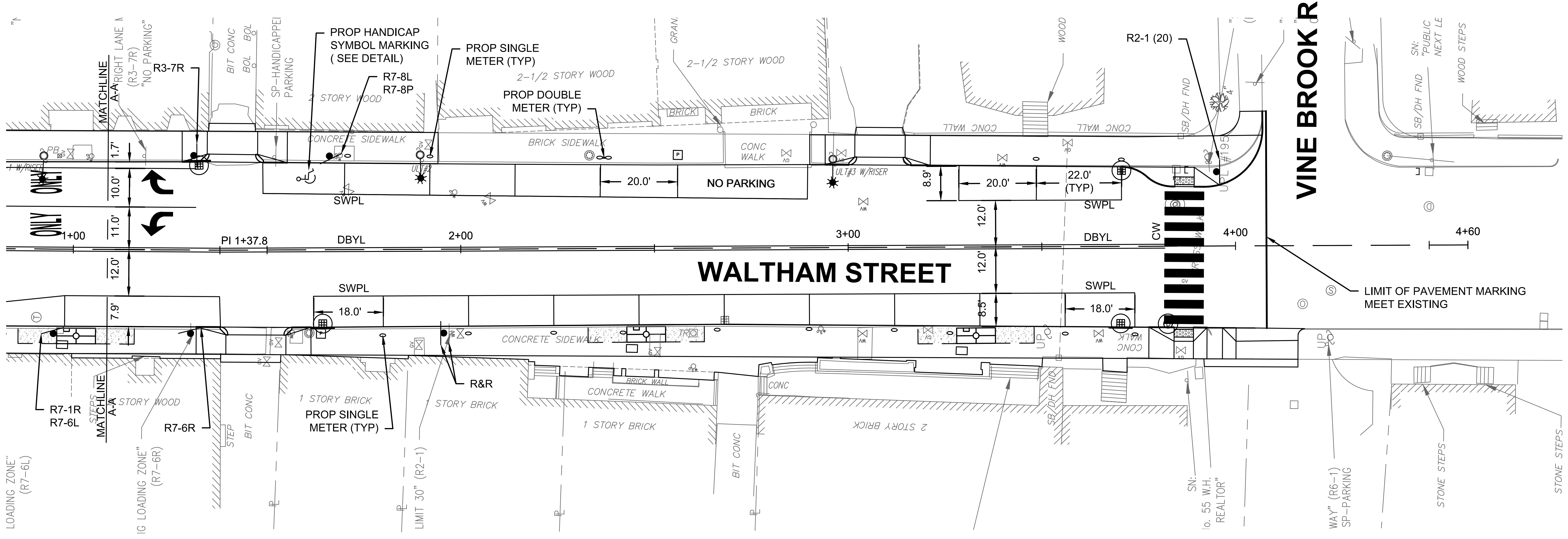

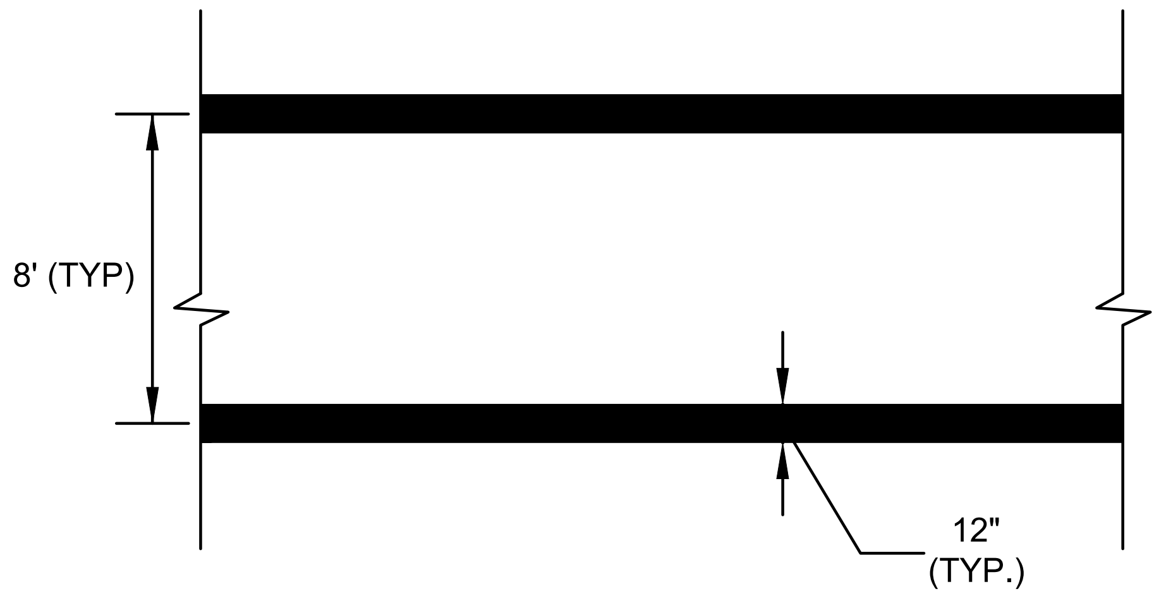

EPOXY CROSSWALK DETAIL
(WALTHAM ST AT MASSACHUSETTS AVE ONLY)
NOT TO SCALE

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KIEN Y. HO
CIVIL ENGINEER
2/8/21

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LEXINGTON, MASSACHUSETTS

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N
EDISON WAY
ONE WAY
GRANT STREET
MASSACHUSETTS AVENUE
(ROUTES 4 & 225)
WALLIS COURT
CONTINUED ON SHEET NO. 40
CONTINUED ON SHEET NO. 42
PROP PARKING PAY STATION #7
LIMIT OF PAVEMENT MARKING MEET EXISTING
R6-2R
D3-5
R3-4
R3-2
R6-2
REMOVE "EDISON WAY" & R6-1 RETAIN "MASS AVE"
R&R SP-PARKING (2 PANELS)
SP-1R
R7-2
PROP DOUBLE METER (TYP)
PROP PARKING PAY STATION #8
PROP SINGLE METER (TYP)
D3-6
R1-1
LIMIT OF PAVEMENT MARKING MEET EXISTING
W12-2
STOP SIGN (R1-1) "LOW BRIDGE 11'-3" CLEARANCE"
PROP PARKING PAY STATION #13
SP-HANDICAPPED PARKING
NO U-TURN (R3-4)
PROP HANDICAP SYMBOL MARKING (SEE DETAIL)
R7-8R
R7-8P
"ONE WAY" (R6-1) "DO NOT ENTER" (R5-1)
W11-1
MA-W16-19P
LIMIT OF PAVEMENT MARKING MEET EXISTING
SP-PARKING NO U-TURN (R3-4)
R&R SP-PARKING
MBTA BUS STOP
MBTA BUS SIGN (B.O.)
PROP SHARED LANE MARKING (TYP)
SYGL 12" @ 45° 10' O.C.
PROP PARKING PAY STATION #9
PROP 3" CONDUIT FOR FUTURE USE
PROP SINGLE METER (TYP)
PROP DOUBLE METER (TYP)
SP-1R
MBTA BUS SIGN (B.O.)
MBTA BUS SIGN (B.O.)
R3-4 (ON LP)
NO U-TURN (R3-4)
R3-17
PROP BICYCLE LANE MARKING (TYP)
PROP PARKING PAY STATION #10
MBTA BUS STOP "LIBERTY RIDE STOP"
SP-1L
SP-NO PARKING HERE TO X-WALK
GRANITE POST
D3-7
R3-4
"WALLIS CT" NO U-TURN (R3-4)
LIMIT OF PAVEMENT MARKING MEET EXISTING
PROP PARKING PAY STATION #11
R&R "NOT A THROUGH
R7-1LR
"NO PARKING EITH
"NO PARKING EITHER SIDE"
CW
SL
SWL
SWPL
DBYL
BWL
DWLEx
SWL-170'
20+00
21+00
22+00
23+00
24+00
25+00
70+00
71+00
80+00
81+00
90+00
90+75
100+00
PT 23+39.2
PC 23+86.8
1727
1723
1717
1713
1709
1728
1726
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1684
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1632
1661
1625
4 GRANT ST
SOLID WHITE EDGE LINE
BIT CONC DRIVEWAY

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CHECKED BY: GL

REGISTERED PROFESSIONAL

KIEN Y. HO
CIVIL ENGINEER

Kieny Ho
2/8/21

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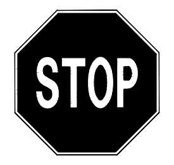
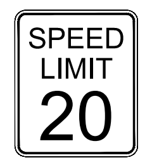
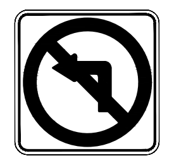
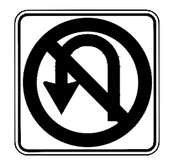
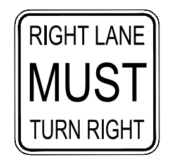
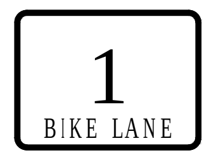
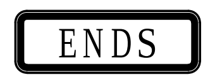
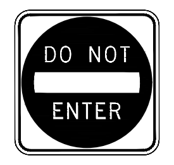
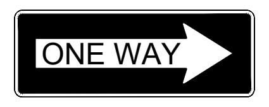
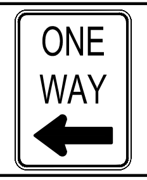
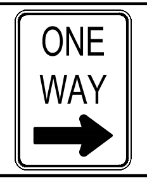
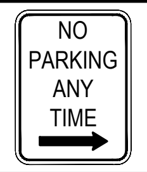
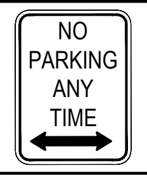
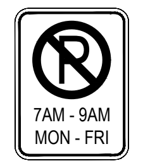
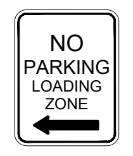
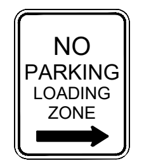
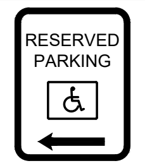
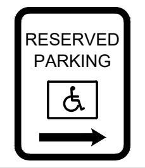
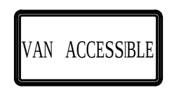
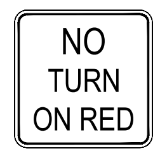
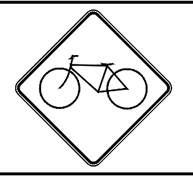
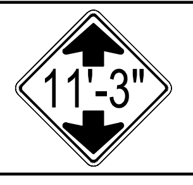
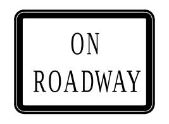
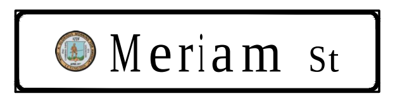
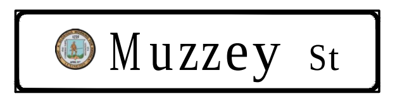
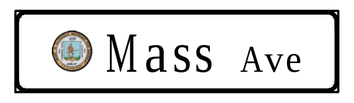
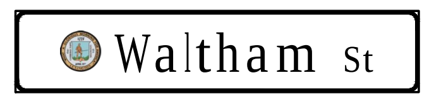
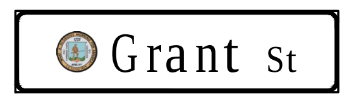
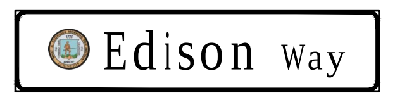
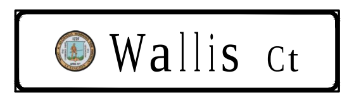
TOWN CENTER IMPROVEMENTS
SIGN AND PAVEMENT MARKING PLAN
LEXINGTON, MASSACHUSETTS

BETA JOB NO. 6331

ISSUE DATE 02/05/2021

SHEET NO. 42 OF 92

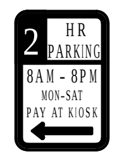
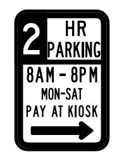
IDENTIFICATION NUMBER	SIZE OF SIGN		TEXT	DIMENSIONS (in)			NUMBER OF SIGNS REQUIRED	COLOR			POST SIZE AND NUMBER REQUIRED	UNIT AREA IN SQUARE FEET	AREA IN SQUARE FEET
	WIDTH	HEIGHT		LETTER HEIGHT	VERTICAL SPACING	ARROW		BACKGROUND	LEGEND	BORDER			
R1-1	30 in	30 in		SEE 2009 MUTCD STANDARDS			3	RED	WHITE	WHITE	2" ROUND 3	6.25	18.75
R2-1(20)	24 in	30 in					1	WHITE	BLACK	BLACK	2" ROUND 1	5.0	5.0
R3-2	24 in	24 in					2	WHITE	RED / BLACK	BLACK	2" ROUND 2	4.0	8.0
R3-4	24 in	24 in					6	WHITE	BLACK	BLACK	MOUNT 1 ON LP, 2" ROUND 5	4.0	24.0
R3-7R	30 in	30 in					1	WHITE	BLACK	BLACK	2" ROUND 1	6.25	6.25
R3-17	24 in	18 in					3	WHITE	BLACK	BLACK	2" ROUND 3	3.0	9.0
R3-17bP	24 in	8 in					1	WHITE	BLACK	BLACK	MOUNT W/ R3-17	1.5	1.5
R5-1	30 in	30 in					1	WHITE	RED / BLACK	BLACK	2" ROUND 1	6.25	6.25
R6-1	36 in	12 in					2	BLACK	BLACK	WHITE	MOUNT 1 W/ R1-1 2" ROUND 1	3.0	6.0
R6-2	24 in	30 in					2	WHITE	BLACK	BLACK	2" ROUND 2	5.0	10.0
R6-2R	24 in	30 in					2	WHITE	BLACK	BLACK	MOUNT W/ R6-2	5.0	10.0
R7-1R	12 in	18 in					1	RED	WHITE	RED	2" ROUND 1	1.5	1.5
R7-1LR	12 in	18 in					1	RED	WHITE	RED	2" ROUND 1	1.5	1.5
R7-2	12 in	18 in					2	RED	WHITE / BLACK	RED	2" ROUND 2	1.5	3.0
R7-6L	12 in	18 in					1	RED	WHITE	RED	MOUNT W/ R7-1R	1.5	1.5
R7-6R	12 in	18 in					1	RED	WHITE	RED	2" ROUND 1	1.5	1.5
R7-8L	12 in	18 in					1	WHITE	GREEN / BLUE	GREEN	2" ROUND 1	1.5	1.5
R7-8R	12 in	18 in					2	WHITE	GREEN / BLUE	GREEN	2" ROUND 2	1.5	3.0
R7-8P	18 in	9 in					3	WHITE	GREEN / BLUE	GREEN	MOUNT 2 W/ R7-8R MOUNT 1 W/ R7-8L	1.1.25	3.375
R10-11b	30 in	30 in					2	WHITE	BLACK	BLACK	MOUNT 1 ON SP, MOUNT 1 ON LP	6.25	12.5

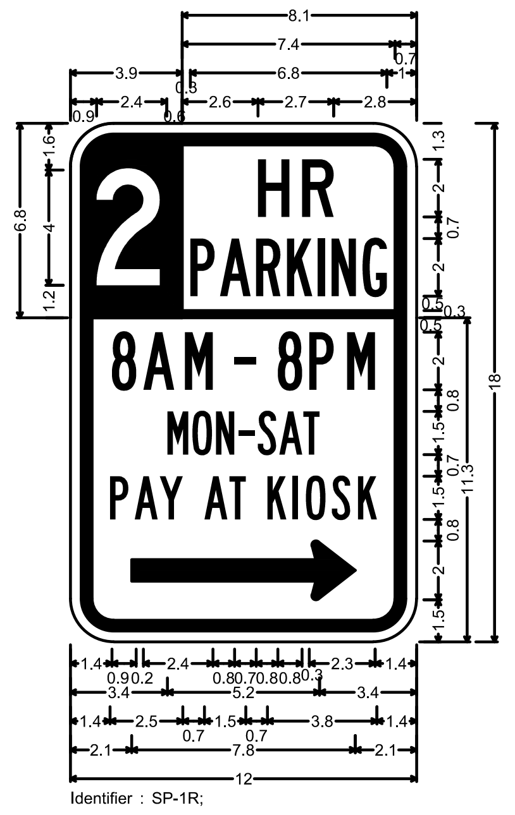
IDENTIFICATION NUMBER	SIZE OF SIGN		TEXT	DIMENSIONS (in)			NUMBER OF SIGNS REQUIRED	COLOR			POST SIZE AND NUMBER REQUIRED	UNIT AREA IN SQUARE FEET	AREA IN SQUARE FEET
	WIDTH	HEIGHT		LETTER HEIGHT	VERTICAL SPACING	ARROW		BACKGROUND	LEGEND	BORDER			
W11-1	24 in	24 in		SEE 2009 MUTCD STANDARDS			3	YELLOW	BLACK	BLACK	2" ROUND 3	4.0	12.0
W12-2	36 in	36 in					1	YELLOW	BLACK	BLACK	2" ROUND 1	9.0	9.0
MA-W16-19P	24 in	18 in		SEE MASSDOT STANDARDS			3	YELLOW	BLACK	BLACK	MOUNT W/ W11-1	3.0	9.0
D3-1	54 in	12 in		6D/4D	3 3	6" TOWN SEAL	2	GREEN	WHITE	WHITE	MOUNT ON LP	-	-
D3-2	54 in	12 in		6D/4D	2.8 3.2	6" TOWN SEAL	2	GREEN	WHITE	WHITE	MOUNT W/ R6-1	-	-
D3-3	48 in	12 in		6D/4D	3 3	6" TOWN SEAL	2	GREEN	WHITE	WHITE	MOUNT ON MA POST	-	-
D3-4	60 in	12 in		6D/4D	3 3	6" TOWN SEAL	2	GREEN	WHITE	WHITE	MOUNT ON MA POST	-	-
D3-5	48 in	12 in		6D/4D	3 3	6" TOWN SEAL	2	GREEN	WHITE	WHITE	MOUNT W/ R6-2R	-	-
D3-6	54 in	12 in		6D/4D	2.8 3.2	6" TOWN SEAL	2	GREEN	WHITE	WHITE	MOUNT W/ R1-1	-	-
D3-7	48 in	12 in		6D/4D	3 3	6" TOWN SEAL	2	GREEN	WHITE	WHITE	MOUNT W/ R3-4	-	-

NOTES:

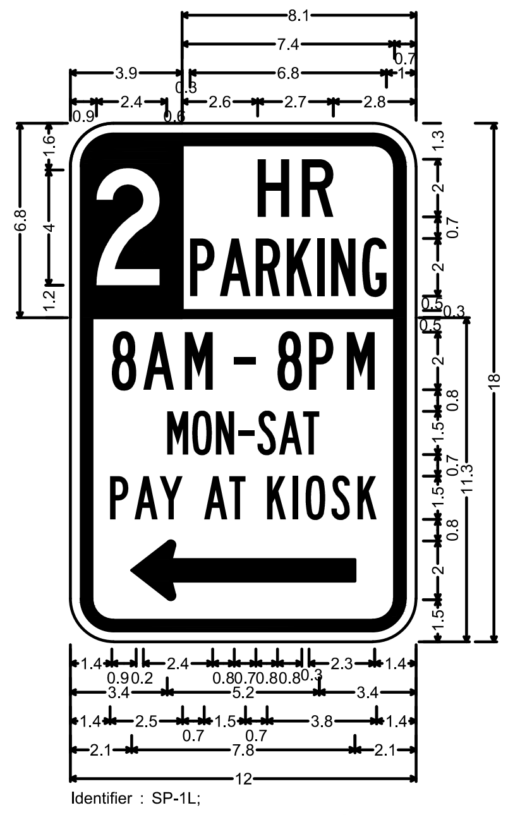
1. SEE THE CURRENT "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" AND "STANDARD HIGHWAY SIGNS" FOR THE LATEST SPECIFICATIONS ON TEXT DIMENSIONS AND COLOR. (ALSO SEE SECTION M9.30.0 TYPE III MHD STANDARD SPECIFICATION, THE "MASSACHUSETTS MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES," AND "GUIDE SIGN POLICY FOR SECONDARY STATE HIGHWAYS" (LATEST EDITIONS) BY THE MASSACHUSETTS HIGHWAY DEPARTMENT).
2. ALL POSTS SHALL BE 2" ROUND ALUMINUM POSTS PAINTED GLOSS BLACK PER ITEM 847.2.
3. STREET NAME (D3) SIGNS SHALL BE PAINTED ON ONE SIDE AND SHALL USE TWO SIGNS MOUNTED BACK TO BACK WITH BOLT-THROUGH METHOD. SEE SPECIAL PROVISIONS.

ADDITIVE BID #1 SIGN SUMMARY

IDENTIFICATION NUMBER	SIZE OF SIGN		TEXT	DIMENSIONS (in)			NUMBER OF SIGNS REQUIRED	COLOR			POST SIZE AND NUMBER REQUIRED	UNIT AREA IN SQUARE FEET	AREA IN SQUARE FEET
	WIDTH	HEIGHT		LETTER HEIGHT	VERTICAL SPACING	ARROW		BACKGROUND	LEGEND	BORDER			
SP-1L	12 in	18 in		SEE SPECIAL SIGN DETAILS			8	WHITE	BLUE	BLUE	2" ROUND 8	1.5	12.0
SP-1R	12 in	18 in					7	WHITE	BLUE	BLUE	2" ROUND 6 MOUNT 1 W/R7-2	1.5	10.5



Identifier : SP-1R;
1.5" Radius, 0.4" Border, White on Green;
[4] C;
1.5" Radius, 0.4" Border, 0.4" Indent, Green on White;
[HR] C 104% spacing;
[PARKING] B 62% spacing;
1.5" Radius, 0.4" Border, 0.4" Indent, Green on White;
[8 AM - 6 PM] B 125% spacing;
[MON-SAT] B 50% spacing;
[PAY AT KIOSK] B 98% spacing;
Standard Arrow Custom 7.8" X 6.1" 0°;



Identifier : SP-1L;
1.5" Radius, 0.4" Border, White on Green;
[4] C;
1.5" Radius, 0.4" Border, 0.4" Indent, Green on White;
[HR] C 104% spacing;
[PARKING] B 62% spacing;
1.5" Radius, 0.4" Border, 0.4" Indent, Green on White;
[8 AM - 6 PM] B 125% spacing;
[MON-SAT] B 50% spacing;
[PAY AT KIOSK] B 98% spacing;
Standard Arrow Custom 7.8" X 6.1" 180°;

SPECIAL SIGN DETAILS

NOT TO SCALE

NUMBER	DATE	MADE BY	CHECKED BY	REVISIONS

DRAWN BY: JCC
DESIGNED BY: JCC
CHECKED BY: GL

REGISTERED PROFESSIONAL
KIEN Y. HO
CIVIL ENGINEER
Kien Ho
2/8/21

PREPARED BY
BETA
www.BETA-Inc.com

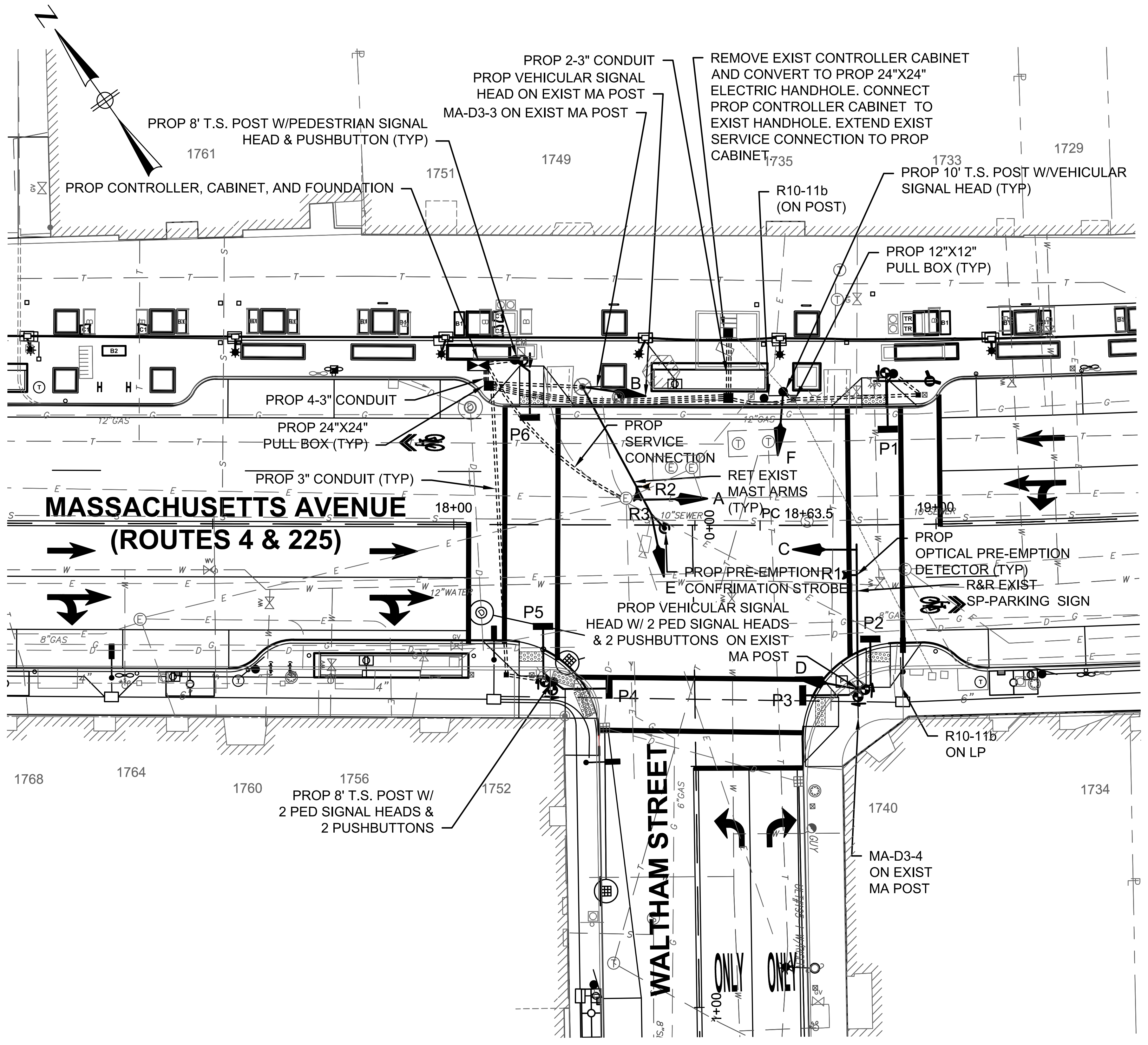
SUBCONSULTANT

SCALE
UNLESS OTHERWISE NOTED OR CHANGED BY REPRODUCTION

TITLE
TOWN CENTER IMPROVEMENTS
TRAFFIC SIGN SUMMARY
LEXINGTON, MASSACHUSETTS

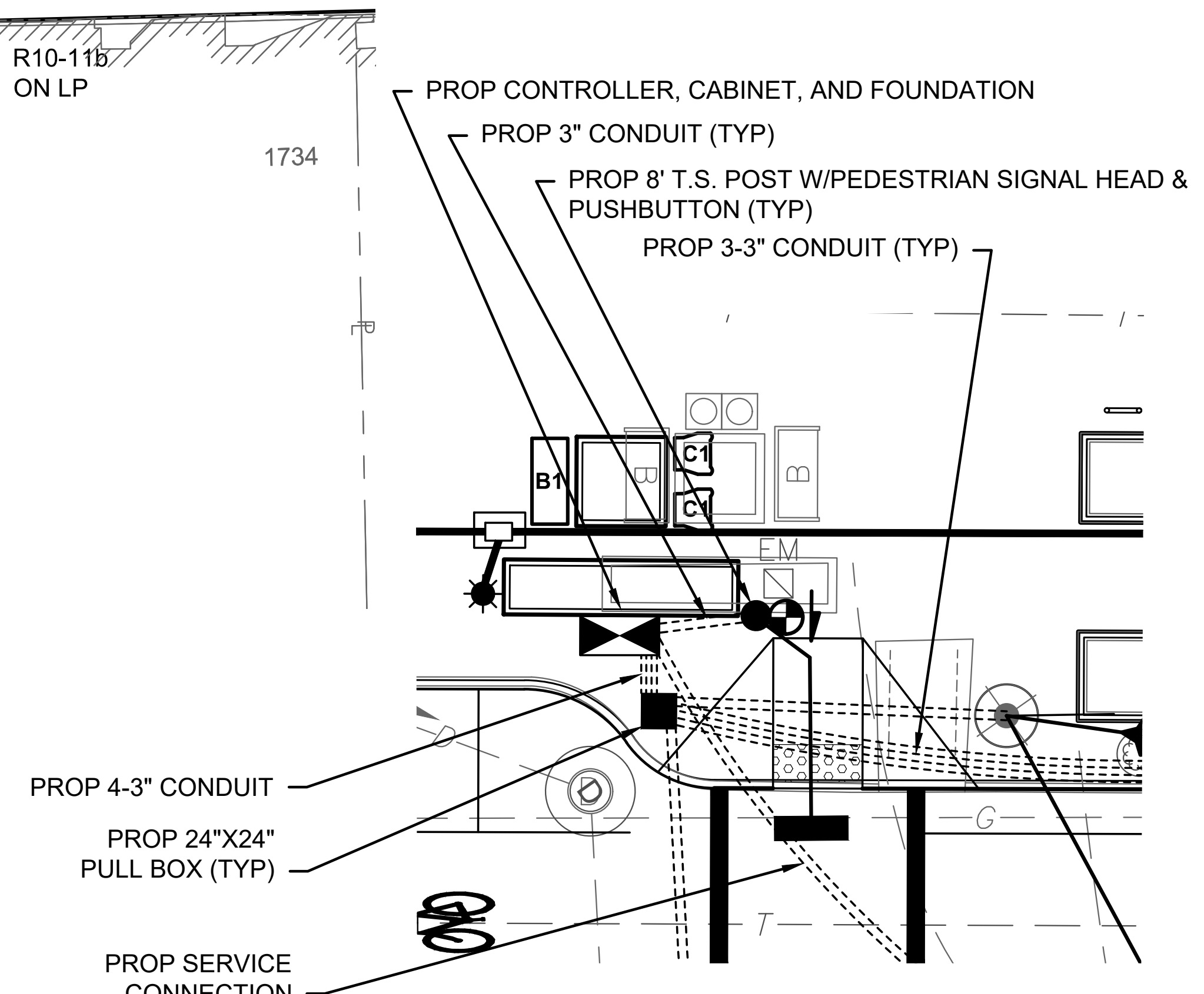
BETA JOB NO. 6331
ISSUE DATE 02/05/2021
SHEET NO. 43 OF 92

2/8/2021 12:12 PM O:\6300S\6331 - LEXINGTON CENTER STREETSCAPE\DRAWING FILES\PLANSET\6331_SIGN PVMK.DWG (BETA STB BW.STB)


PROP 2-3" CONDUIT
PROP VEHICULAR SIGNAL HEAD ON EXIST MA POST
MA-D3-3 ON EXIST MA POST
REMOVE EXIST CONTROLLER CABINET AND CONVERT TO PROP 24"X24" ELECTRIC HANDHOLE. CONNECT PROP CONTROLLER CABINET TO EXIST HANDHOLE. EXTEND EXIST SERVICE CONNECTION TO PROP CABINET.
PROP 8' T.S. POST W/PEDESTRIAN SIGNAL HEAD & PUSHBUTTON (TYP)
PROP CONTROLLER, CABINET, AND FOUNDATION
1761
1751
1749
1735
1733
1729
R10-11b (ON POST)
PROP 10' T.S. POST W/VEHICULAR SIGNAL HEAD (TYP)
PROP 12"X12" PULL BOX (TYP)
PROP 4-3" CONDUIT
PROP 24"X24" PULL BOX (TYP)
PROP 3" CONDUIT (TYP)
PROP SERVICE CONNECTION
RET EXIST MAST ARMS (TYP)
PC 18+63.5
MASSACHUSETTS AVENUE
(ROUTES 4 & 225)
18+00
19+00
0+00
P1
P2
P3
P4
P5
P6
A
B
C
D
E
F
R1
R2
R3
PROP OPTICAL PRE-EMPTION DETECTOR (TYP)
PROP PRE-EMPTION CONFIRMATION STROBE
R&R EXIST SP-PARKING SIGN
PROP VEHICULAR SIGNAL HEAD W/ 2 PED SIGNAL HEADS & 2 PUSHBUTTONS ON EXIST MA POST
R10-11b ON LP
1768
1764
1760
1756
1752
1740
1734
PROP 8' T.S. POST W/ 2 PED SIGNAL HEADS & 2 PUSHBUTTONS
WALTHAM STREET
ONLY
MA-D3-4 ON EXIST MA POST
12" GAS
8" GAS
12" WATER
10" SEWER

PROPOSED SIGNAL LAYOUT

20 0 20 40
SCALE IN FEET: 1"=20'

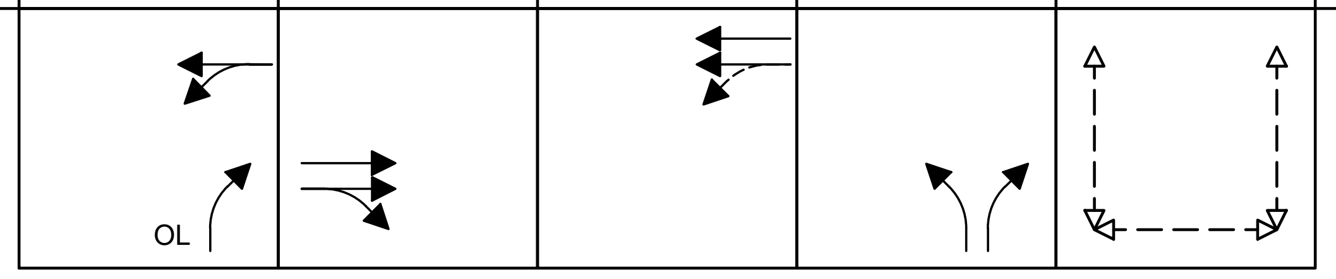

PROP CONTROLLER, CABINET, AND FOUNDATION
PROP 3" CONDUIT (TYP)
PROP 8' T.S. POST W/PEDESTRIAN SIGNAL HEAD & PUSHBUTTON (TYP)
PROP 3-3" CONDUIT (TYP)
PROP 4-3" CONDUIT
PROP 24"X24" PULL BOX (TYP)
PROP SERVICE CONNECTION
B1
C1
EM

CONTROLLER CABINET CONDUIT DETAIL

SCALE: 1" = 10'

SIGNAL PHASING AND TIMING CHART

SEQUENCE AND TIMING CHART FOR FULLY ACTUATED SIGNAL CONTROL (ISOLATED)																		
PHASE/EMERGENCY PRE-EMPTION			Ø1			Ø2			Ø6			Ø8			Ø9			FLASH OPER.
STREET	DIRECTION	HOUSINGS	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
MASSACHUSETTS AVENUE	WB	A	←G/G	←Y/Y	R	R	R	R	G	Y	R	R	R	R	R	R	R	FR
MASSACHUSETTS AVENUE	WB	B	R	R	R	R	R	R	G	Y	R	R	R	R	R	R	R	FY
MASSACHUSETTS AVENUE	EB	C,D	R	R	R	G	Y	R	R	R	R	R	R	R	R	R	R	FY
WALTHAM STREET	NB	E	R	R	R	R	R	R	R	R	R	G	Y	R	R	R	R	FR
WALTHAM STREET	NB	F	R/G→	R/Y→	R	R	R	R	R	R	R	G	Y	R	R	R	R	FR
PEDESTRIAN	ALL	P1-P6	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	W	FDW	DW	OFF
TIMING IN SECONDS																		
MINIMUM GREEN			6			10			10			10						EMERGENCY ONLY
VEHICLE EXTENSION			2			3			3			2						
MAXIMUM GREEN I (4:00 PM - 6:00 PM MON - FRI)			7			28			40			19						
MAXIMUM GREEN II (ALL OTHER TIMES)			25			40			40			20						
CLEARANCE INTERVAL				3.0	2.5		3.5	1.5		3.5	1.5		3.0	2.5				
WALK/CLEARANCE/BUFFER INTERVAL															7	11	4	
DETECTOR MEMORY			NON-LOCK			NON-LOCK			NON-LOCK			NON-LOCK			LOCK			
RECALL SWITCH			OFF			SOFT			SOFT			OFF			OFF			



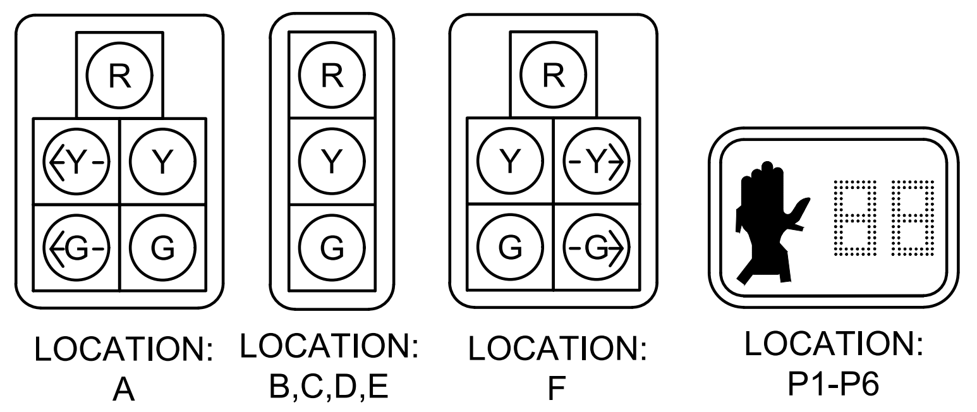
OL: OVERLAP

TRAFFIC SIGNAL NOTES:

1. IF THE ASSIGNED RIGHT-OF-WAY FOR ANY TRAFFIC MOVEMENT IS TO REMAIN IN EFFECT DURING THE NEXT CALLED PHASE, THE SIGNAL INDICATIONS FOR THAT TRAFFIC MOVEMENT WILL NOT CHANGE DURING THE CLEARANCE INTERVAL.
2. IF THE ASSIGNED RIGHT-OF-WAY FOR ANY TRAFFIC MOVEMENT IS TO CHANGE DURING THE NEXT CALLED PHASE, THE SIGNAL INDICATION FOR THAT TRAFFIC MOVEMENT WILL DISPLAY THE APPROPRIATE CLEARANCE INTERVALS.
3. FLASHING OPERATION IS FOR EMERGENCY OPERATION ONLY. THE SIGNAL SHALL PROVIDE STOP AND GO OPERATION 24 HRS. DAILY.
4. PEDESTRIAN PHASE TO BE ACTIVATED BY PEDESTRIAN PUSHBUTTON ONLY.
5. PEDESTRIAN PUSHBUTTONS AND SIGNS SHALL BE LOCATED IN ACCORDANCE WITH THE 2009 MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (FIG. 4E-4) AND POINTED PARALLEL TO THE CROSSWALK.
6. EXISTING VIDEO DETECTION SYSTEM SHALL BE RELOCATED TO NEW CABINET. CONTRACTOR SHALL MAKE ALL NECESSARY CONNECTIONS AND ADJUSTMENTS TO RESTORE EXISTING OPERATION IN THE NEW CABINET. EXISTING VIDEO DETECTION SHALL BE REMOVED FROM MAST ARMS DURING PAINTING AND THEN RESET.
7. EXISTING CONDUITS AND WIRING SHALL BE MAINTAINED UNLESS OTHERWISE NOTED.
8. ALL EXISTING VEHICULAR AND PEDESTRIAN SIGNAL HEADS, ASSOCIATED POSTS, AND PUSHBUTTON ASSEMBLIES SHALL BE REMOVED AND DISPOSED UNLESS OTHERWISE NOTED.
9. REMAINING EXISTING (MAST ARM ASSEMBLIES) AND PROPOSED SIGNAL EQUIPMENT SHALL BE PAINTED FLAT BLACK.
10. CONTRACTOR SHALL MAINTAIN TRAFFIC OPERATIONS AT ALL TIME EXCEPT DURING CONTROLLER SWITCHOVER.
11. CONTRACTOR SHALL NOTIFY THE TOWN ENGINEER A MINIMUM OF 72 HOURS IN ADVANCE IN THE EVENT OF ANY MAJOR TRAFFIC OPERATIONAL INTERRUPTION DURING THE INSTALLATION OF SIGNAL EQUIPMENT.
12. ALL PROPOSED SIGNAL CONTROLLER CABINET EQUIPMENT SHALL BE COMPATIBLE WITH THE EXISTING SIGNAL EQUIPMENT (VIDEO DETECTION SYSTEM).
13. OPTICAL DETECTORS SHALL BE LOCATED FOR OPTIMUM SIGHT DISTANCE.

EMERGENCY PREEMPTION SCHEDULE

APPROACH	PRIORITY & RECEIVER	PREEMPTION PHASE	NEXT PHASE CALLED
EASTBOUND	R1	2	2 & 6
WESTBOUND	R2	1 & 6	2 & 6
NORTHBOUND	R3	8	1 & 6



SIGNAL HEAD DESIGNATIONS

NOT TO SCALE

SIGNAL HEAD NOTES

1. ALL SIGNAL HEADS SHALL HAVE BACKPLATES WITH NO RETROREFLECTIVE BORDER AND TUNNEL VISORS.
2. ALL SIGNAL BACKPLATES SHALL BE 5" LOUVERED.
3. ALL SIGNAL LENSES SHALL BE 12" DIA. LED.
4. ALL PEDESTRIAN SIGNAL HEADS SHALL DISPLAY INTERNATIONAL SYMBOLS - (HAND)/(PERSON WALKING) WITH COUNTDOWN DISPLAYS.
5. ALL PEDESTRIAN SIGNAL HEADS SHALL HAVE 16" LED LENSES AND SUN VISORS.
6. ALL SIGNAL HEADS SHALL BE FIXED MOUNTED.

DETECTOR DATA

1. EXISTING VIDEO DETECTION SYSTEM SHALL BE RELOCATED TO NEW CABINET, EXCEPT FOR THE VIDEO PROCESSOR. THE VIDEO PROCESSOR SHALL BE REPLACED AS NOTED IN SPECIFICATIONS. CONTRACTOR SHALL MAKE ALL NECESSARY CONNECTIONS AND ADJUSTMENTS TO RESTORE EXISTING OPERATION IN THE NEW CABINET.

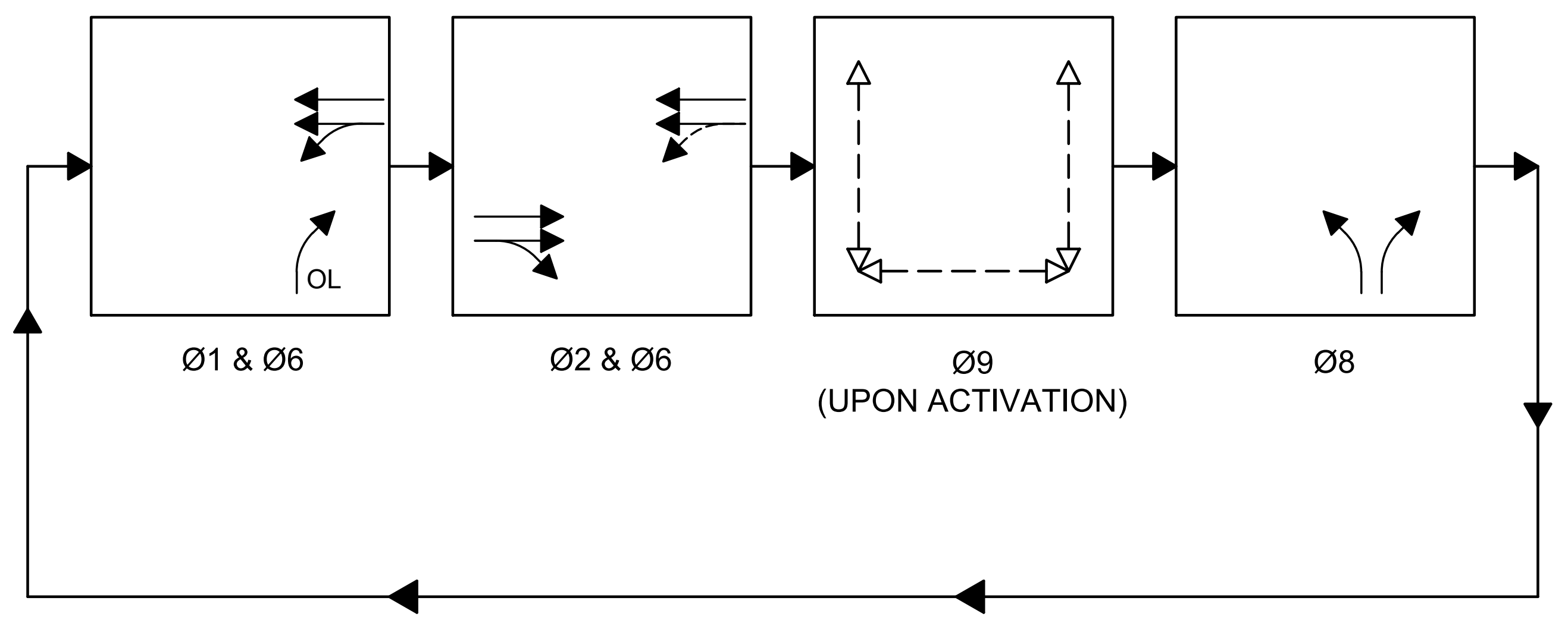
EMERGENCY PREEMPTION NOTES:

1. UPON PREEMPTION ACTIVATION, PHASE(S) BEING SERVICED SHALL IMMEDIATELY BEGIN CLEARANCE (I.E., YELLOW AND ALL RED) AS DESIGNED, EXCEPT FOR WHEN PHASE(S) CALLED BY PREEMPTION ARE CURRENTLY IN SERVICE. WHEN PHASE(S) CURRENTLY IN SERVICE MATCH PHASE(S) CALLED BY PREEMPTION, SIGNAL INDICATIONS ARE MAINTAINED. HOWEVER, PREEMPTION OPERATION (I.E. TIMING) SUPERCEDES NORMAL TRAFFIC SIGNAL CONTROL.
2. AFTER THE PREEMPTION SEQUENCE HAS TERMINATED, THE SIGNAL SHALL RETURN TO THE BEGINNING OF Ø2 & Ø6.
3. THE PREEMPTION STROBE SHALL BE ILLUMINATED ONLY WHEN THE PREEMPTED PHASE IS DISPLAYING A GREEN INDICATION.
4. EMERGENCY PREEMPTION SHALL COME ON A FIRST-COME FIRST-SERVED BASIS.
5. A SEPARATE CABLE SHALL BE RUN FOR THE PREEMPTION STROBE IT MAY NOT BE RUN ON THE SPARE SIGNAL CABLE.

MAJOR ITEMS

QUANTITY	DESCRIPTION
1	TRAFFIC SIGNAL CONTROLLER (TS2, TYPE 1), LOCATED IN BASE MOUNTED CABINET WITH FOUNDATION
1	TRAFFIC SIGNAL POST AND BASE STANDARD - 10' STEEL
3	TRAFFIC SIGNAL POST AND BASE STANDARD - 8' STEEL
4	SIGNAL HEAD, 1-WAY, 3 SECTION, 12" LENSES
2	SIGNAL HEAD, 1-WAY, 5 SECTION, 12" LENSES
4	5" 3-SECTION LOUVERED BACKPLATE
2	5" 5-SECTION LOUVERED BACKPLATE
6	PEDESTRIAN SIGNAL HEAD, 1-WAY, 1 SECTION, 16" WITH COUNTDOWN
6	AUDIBLE & VIBRO-TACTILE PEDESTRIAN PUSHBUTTON INTEGRATED SIGN & SADDLE WITH LED CONFIRMATION LIGHT
1	CARD RACK
1	REMOVE AND RESET EXISTING VIDEO DETECTION SYSTEM
1	GRIDSMART GS2 PROCESSOR
3	OPTICAL DETECTOR, UNILATERAL, SINGLE CHANNEL
1	EMERGENCY PREEMPTION CONFIRMATION STROBE (WHITE)
1	4 CHANNEL PHASE SELECTOR
3	PULL BOX, 12" X 12" (ITEM 811.31)
3	ELECTRIC HANDHOLE, 24" X 24" (ITEM 811.23)
1	SERVICE CONNECTION

PLUS ALL MISCELLANEOUS EQUIPMENT AND MATERIAL NECESSARY TO PROVIDE A COMPLETE OPERATING TRAFFIC CONTROL SIGNAL.



PREFERENTIAL PHASE SEQUENCE

NUMBER	DATE	MADE BY	CHECKED BY	REVISIONS

DRAWN BY: JCC
DESIGNED BY: JCC
CHECKED BY: KH

REGISTERED PROFESSIONAL
KIEN Y. HO
CIVIL ENGINEER
No. 46731
Kien Ho
2/8/21

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TITLE
TOWN CENTER IMPROVEMENTS
TRAFFIC SIGNAL PLAN
LEXINGTON, MASSACHUSETTS

BETA JOB NO. 6331
ISSUE DATE 02/05/2021
SHEET NO. 44 OF 92

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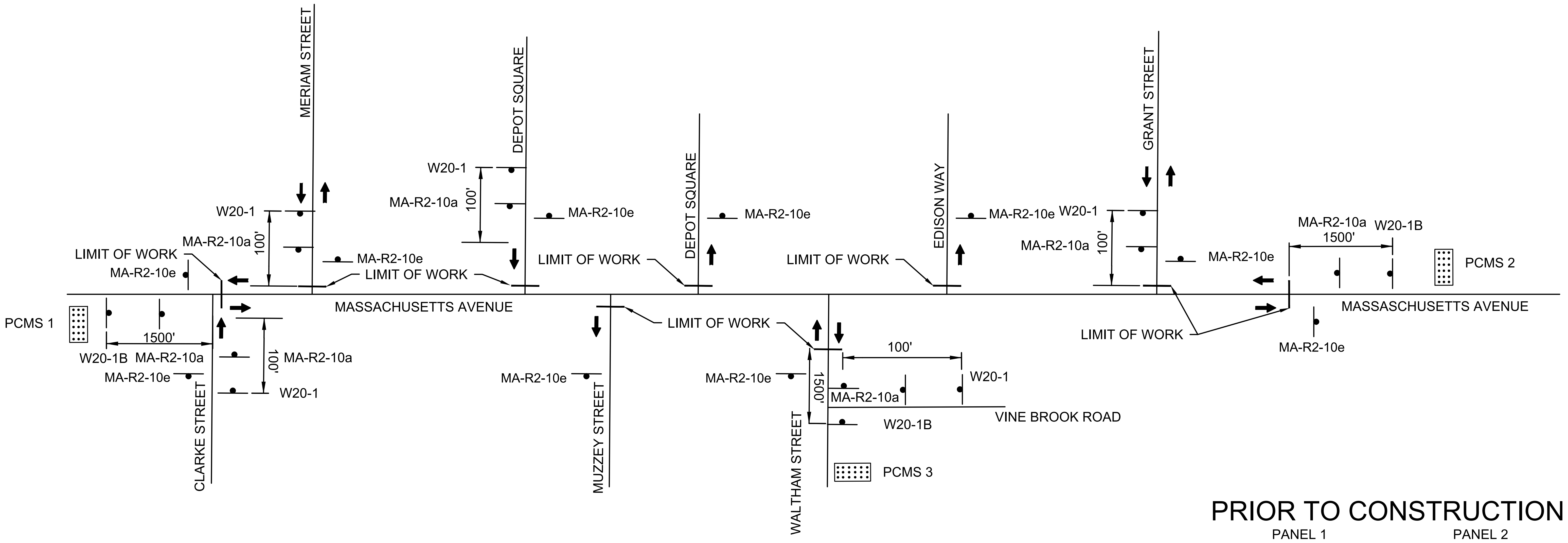
NOTES:

1. ALL TEMPORARY TRAFFIC CONTROL WORK SHALL CONFORM TO THE 2009 EDITION OF THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (MUTCD) AND ALL REVISIONS.
2. ALL SIGN LEGENDS, BORDERS AND MOUNTING SHALL BE IN ACCORDANCE WITH THE MUTCD, EXCEPT THAT BACKGROUND COLOR SHALL BE FLUORESCENT ORANGE, IN ACCORDANCE WITH MASSDOT SPECIFICATIONS.
3. TEMPORARY CONSTRUCTION SIGNING AND ALL OTHER TRAFFIC CONTROL DEVICES SHALL BE IN PLACE PRIOR TO THE START OF ANY WORK.
4. TEMPORARY CONSTRUCTION SIGNING, BARRICADES AND ALL OTHER NECESSARY WORK ZONE TRAFFIC CONTROL DEVICES SHALL BE REMOVED FROM THE HIGHWAY OR COVERED WHEN THEY ARE NOT REQUIRED FOR CONTROL OF TRAFFIC.
5. SIGNS AND SIGN SUPPORTS LOCATED ON OR NEAR THE TRAVELED WAY, AND REFLECTORIZED PLASTIC DRUMS WITH LIGHTING DEVICES MOUNTED ON THEM, MUST PASS THE CRITERIA SET FORTH IN NCHRP REPORT 350, "RECOMMENDED PROCEDURES FOR THE SAFETY PERFORMANCE EVALUATION OF HIGHWAY FEATURES" AND/OR "MANUAL FOR ASSESSING SAFETY HARDWARE" (MASH).
6. CONTRACTORS SHALL NOTIFY EACH ABUTTER AT LEAST 24 HOURS IN ADVANCE OF THE START OF ANY WORK THAT WILL REQUIRE THE TEMPORARY CLOSURE OF ACCESS, SUCH AS CONDUIT INSTALLATION, EXISTING PAVEMENT EXCAVATION, TEMPORARY DRIVEWAY PAVEMENT PLACEMENT AND SIMILAR OPERATIONS.
7. THE FIRST TEN PLASTIC DRUMS OF A TAPER SHALL BE MOUNTED WITH SEQUENTIAL TYPE A LIGHTS.
8. THE ADVISORY SPEED LIMIT, IF REQUIRED, SHALL BE DETERMINED BY THE ENGINEER.
9. DISTANCES ARE A GUIDE AND MAY BE ADJUSTED IN THE FIELD BY THE ENGINEER.
10. MAXIMUM SPACING OF TRAFFIC DEVICES IN A TAPER (DRUMS OR CONES) IS EQUAL IN FEET TO THE SPEED LIMIT IN MPH.
11. MINIMUM LANE WIDTH IS TO BE 12 FEET UNLESS OTHERWISE SHOWN. MINIMUM LANE WIDTH TO BE MEASURED FROM THE EDGE OF DRUMS OR MEDIAN BARRIER.
12. ALL SIGNS SHALL BE MOUNTED ON THEIR OWN STANDARD SIGN SUPPORTS.
13. TEMPORARY CONSTRUCTION SIGNING AND ALL OTHER NECESSARY WORK ZONE TRAFFIC CONTROL NOT COVERED IN THE PLAN SHALL REFER TO MASSDOT "STANDARD DETAILS AND DRAWINGS FOR THE DEVELOPMENT OF TRAFFIC MANAGEMENT PLANS".
14. WORK THIS SHALL BE RESTRICTED TO A NORMAL EIGHT HOUR DAY FROM 7:00 AM TO 4:00 PM, MONDAY THROUGH FRIDAY, WITH THE PRIME CONTRACTOR AND ALL SUBCONTRACTORS WORKING THE SAME SHIFT.
15. BUSINESS ENTRANCES WILL REMAIN ACCESSIBLE DURING BUSINESS HOURS.
15. INSTALL PCMS TWO WEEKS PRIOR TO CONSTRUCTION TO INFORM MOTORISTS OF UPCOMING WORK AT INTERSECTION.



TYPICAL INTERSECTION PROJECT LIMIT SIGNING
NOT TO SCALE

PRIOR TO CONSTRUCTION

PCMS 1
PCMS 2
PCMS 3

PANEL 1

M	A	S	S		A	V	E
		T	O	W	N		
	C	E	N	T	E	R	

PANEL 2

	C	O	N	S	T		
	B	E	G	I	N	S	
			X	X			

DURING CONSTRUCTION

PCMS 1
PCMS 2
PCMS 3

PANEL 1

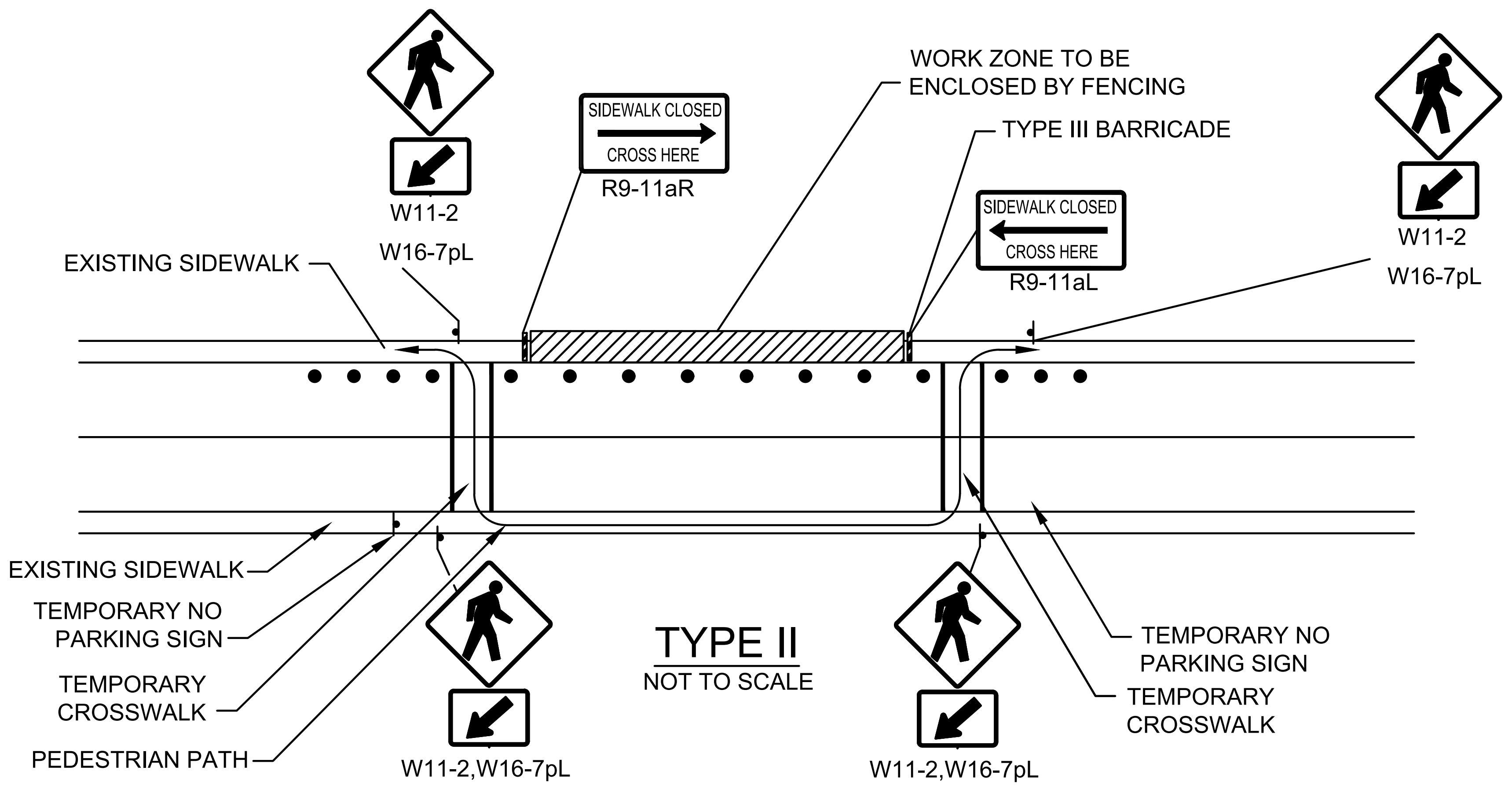
M	A	S	S		A	V	E
		T	O	W	N		
	C	E	N	T	E	R	

PANEL 2

	C	O	N	S	T		
	E	X	P	E	C	T	
	D	E	L	A	Y	S	

LEGEND:

● REFLECTORIZED PLASTIC DRUM
P POLICE DETAIL
▨ TYPE III BARRICADE
⬚ FLASHING ARROW PANEL
⬚ FLASHING ARROW PANEL
⬚ PORTABLE CHANGEABLE MESSAGE SIGN
▨ WORK ZONE
➡ DIRECTION OF TRAFFIC
◧ IMPACT ATTENUATOR
▭ MEDIAN BARRIER
▭ MEDIAN BARRIER WITH WARNING LIGHTS
⬚ WORK VEHICLE
⊠ TRUCK MOUNTED ATTENUATOR
●— TRAFFIC OR PEDESTRIAN SIGNAL
● SIGN
F FLAGGER



TYPE II
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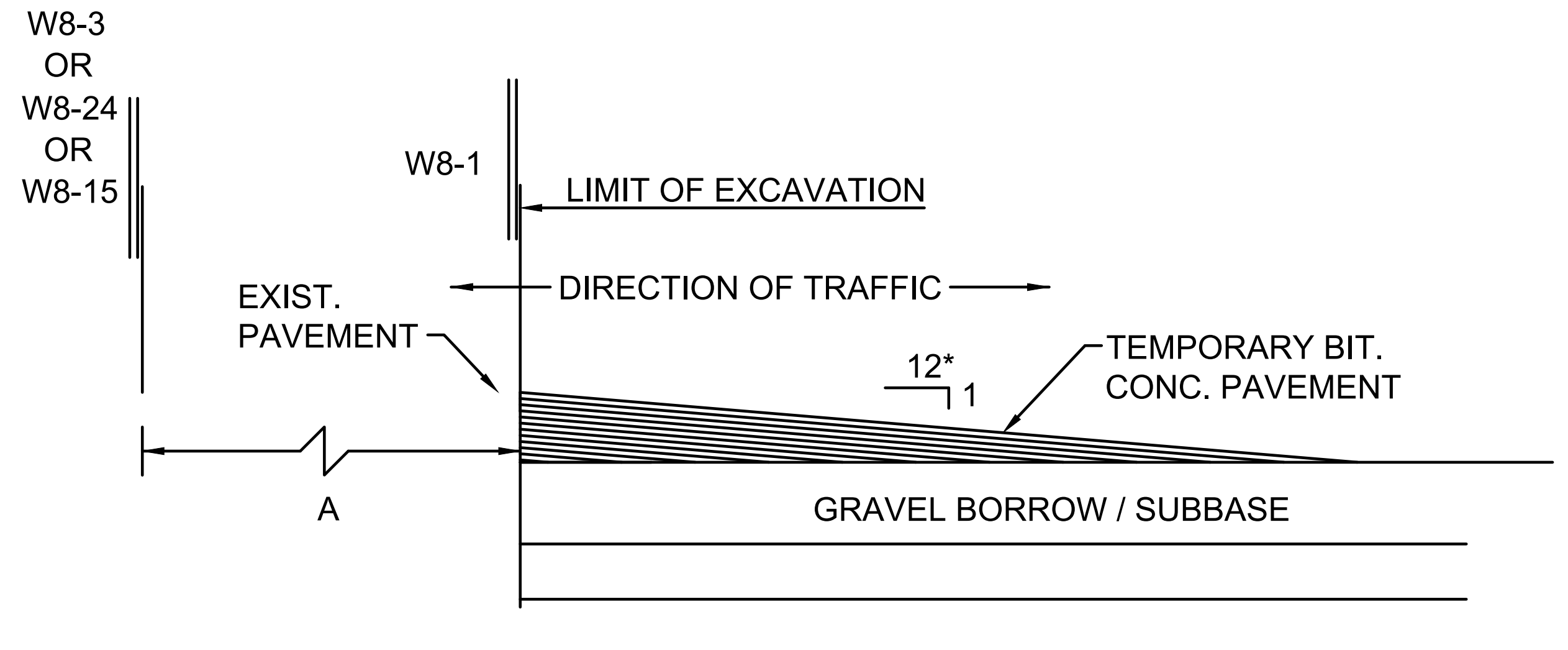


LONGITUDINAL DROP-OFF DETAIL
NOT TO SCALE

* - INCREASE SLOPE RATIO FOR HIGHER SPEEDS

GENERAL CONSTRUCTION STAGES

1. UTILITY WORK
   a. CONSTRUCT ALL PROPOSED DRAINAGE AND UTILITIES (LIGHTING, ETC), CONDUITS AND ADJUST, ABANDON, REMOVE, OR REMOVE AND RESET, ALL EXISTING UTILITIES, AS SHOWN ON THE PLANS.
2. STREETSCAPE PART 1

   INSTALL IRRIGATION, SILVA CELLS, AND STRUCTURAL SOIL.
3. CURBING AND SIDEWALK

   REMOVE AND RESET OR REPLACE CURB AS SHOWN ON PLANS. CONSTRUCT SIDEWALKS.
4. FULL DEPTH CONSTRUCTION
   a. EXCAVATE ROADWAY; PLACE THE GRAVEL SUBBASE, WHILE MAINTAINING TRAFFIC IN EACH DIRECTION ON THE EXISTING ROADWAY.
   b. PLACE CRUSHED STONE AND BASE COURSE.
5. TRAFFIC CONTROL

   INSTALL ALL TRAFFIC SIGNAL EQUIPMENT AND SIGNING.
6. STREETSCAPE PART 2

   INSTALL REMAINING STREETSCAPE FEATURES.
7. PAVEMENT MILLING

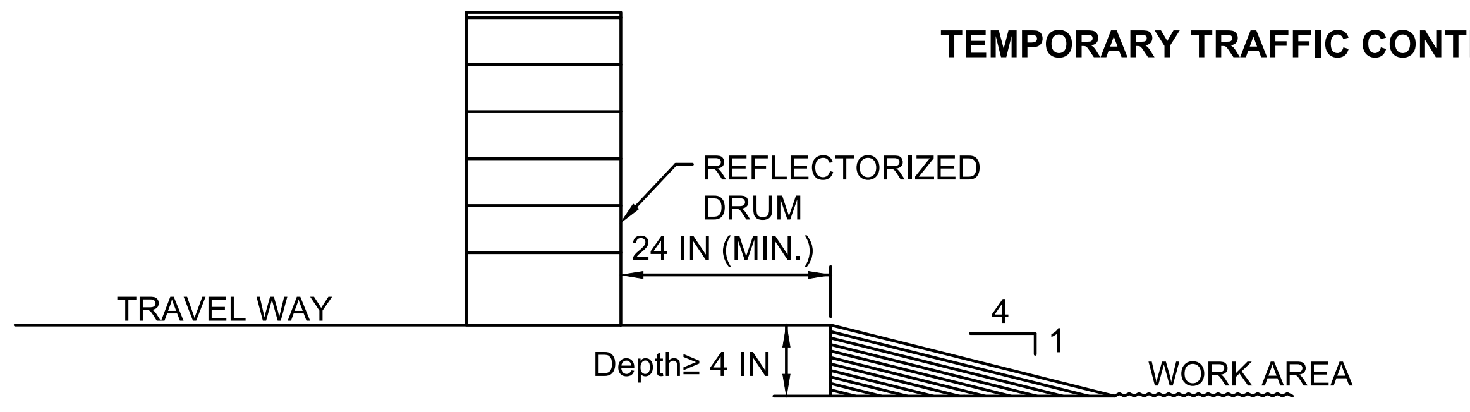
   VARIABLE DEPTH PAVEMENT MILLING AS SHOWN ON THE PLAN AND SECTIONS.
8. TOP COURSE AND BINDER COURSE

   PLACE BINDER COURSE (WHERE REQUIRED) FOLLOWED BY TOP COURSE FOR THE ENTIRE LENGTH OF THE PROJECT.
9. PAVEMENT MARKINGS

   INSTALL PAVEMENT MARKINGS.

NOTES
1. ADDITIONAL ADVANCE WARNING MAY BE NECESSARY.
2. CONTROLS ONLY FOR PEDESTRIAN TRAFFIC ARE SHOWN. VEHICULAR TRAFFIC SHOULD BE HANDLED AS SHOWN ELSEWHERE.
3. STREET LIGHTING SHOULD BE CONSIDERED WHEN LOCATING CONTROL DEVICES.
4. TEMPORARY CROSSWALKS WITH APPROPRIATE SIGNS SHOULD BE INSTALLED TO CROSS PEDESTRIANS TO THE OPPOSITE SIDE OF THE STREET AS SHOWN IN PEDESTRIAN BYPASS TYPE II, AND AS DIRECTED BY THE ENGINEER. TEMPORARY CURB RAMPS WILL BE REQUIRED AT ALL TEMPORARY CROSSWALK LOCATIONS.
5. BYPASS IS TO BE USED IN CONJUNCTION WITH THE PROPOSED LANE CLOSURE DETAILS AND DURING CONSTRUCTION STAGING, AS DIRECTED BY THE ENGINEER.
6. THE TEMPORARY SIDEWALK SHOULD BE A MINIMUM OF 4 FEET WIDE. IF THIS WALKWAY EXCEEDS 200 FEET THEN A 5 FOOT X 5 FOOT PASSING ZONE.

TEMPORARY TRAFFIC CONTROL PLAN



LATERAL DROP-OFF DETAIL
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NUMBER	DATE	MADE BY	CHECKED BY	REVISIONS

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DESIGNED BY: JC
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TOWN CENTER IMPROVEMENTS
TEMPORARY TRAFFIC CONTROL PLAN
LEXINGTON, MASSACHUSETTS

BETA JOB NO. 6331
ISSUE DATE 02/05/2021
SHEET NO. 45 OF 92

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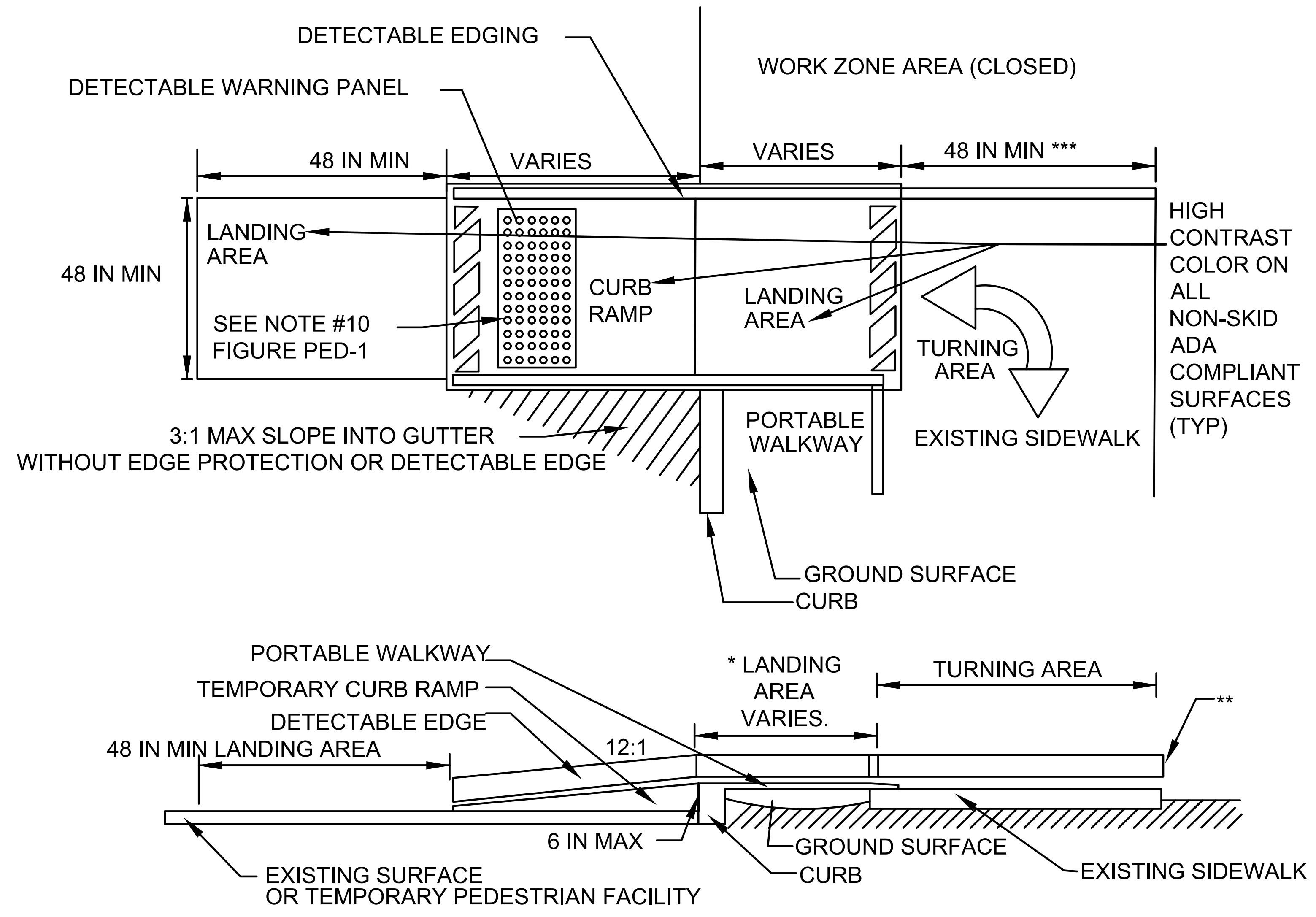


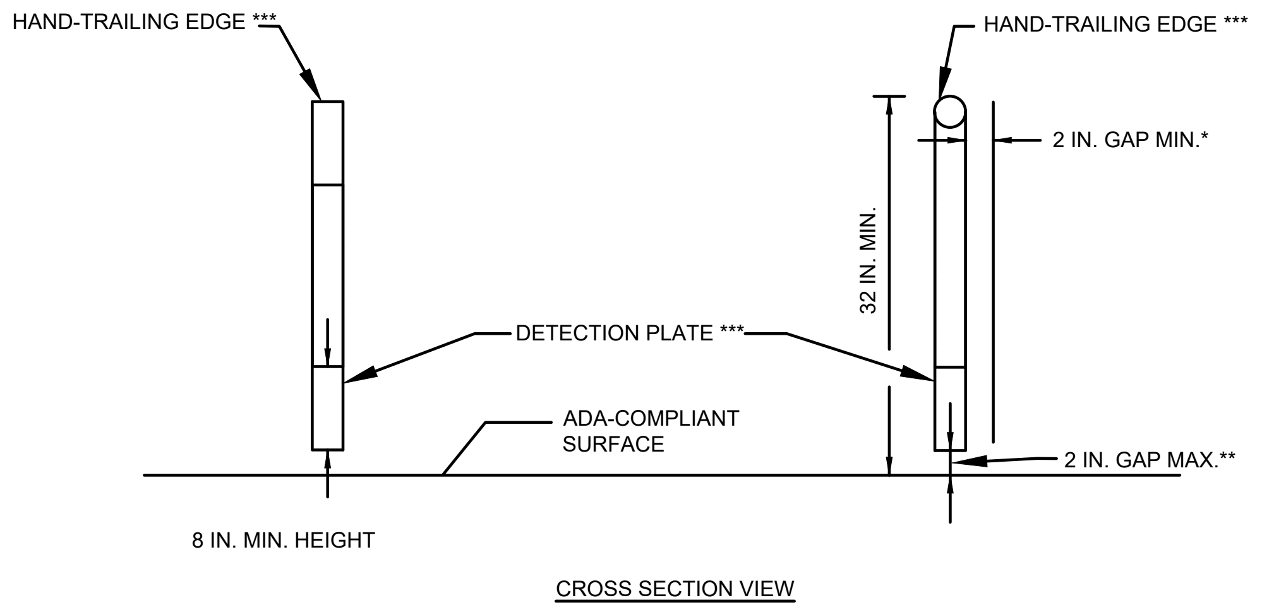
TEMPORARY CURB RAMP

NOT TO SCALE

* -LANDING AREA USED TO OVERLAP NON-ADA COMPLIANT SURFACES.

** -DETECTABLE EDGE REMOVED IF A CONTINUOUS SIDEWALK.

*** -60 IN. IF AN OBSTRUCTION IS AT BACK OF SIDEWALK



PEDESTRIAN CHANNELIZING DEVICE

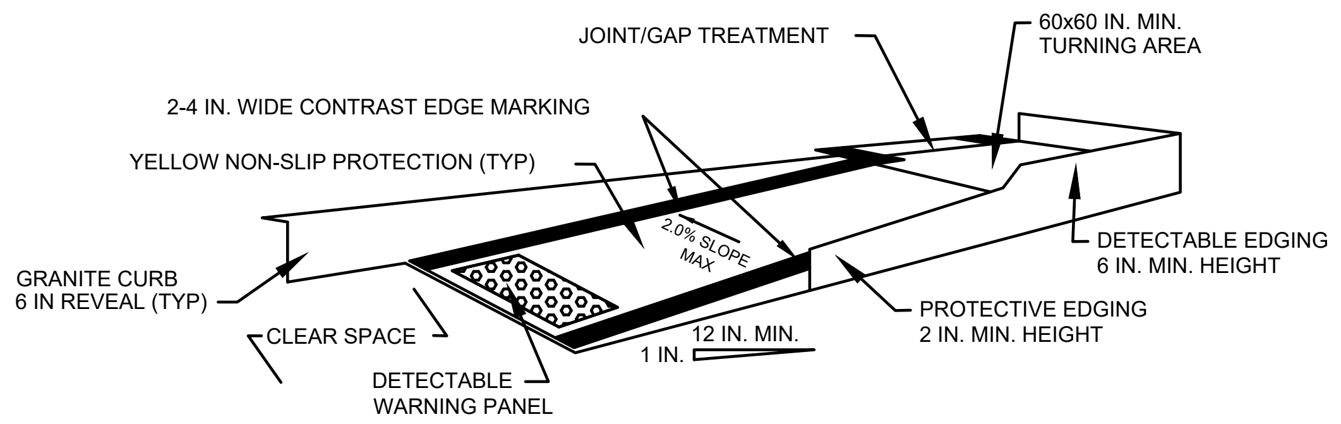
NOT TO SCALE

NOTES:

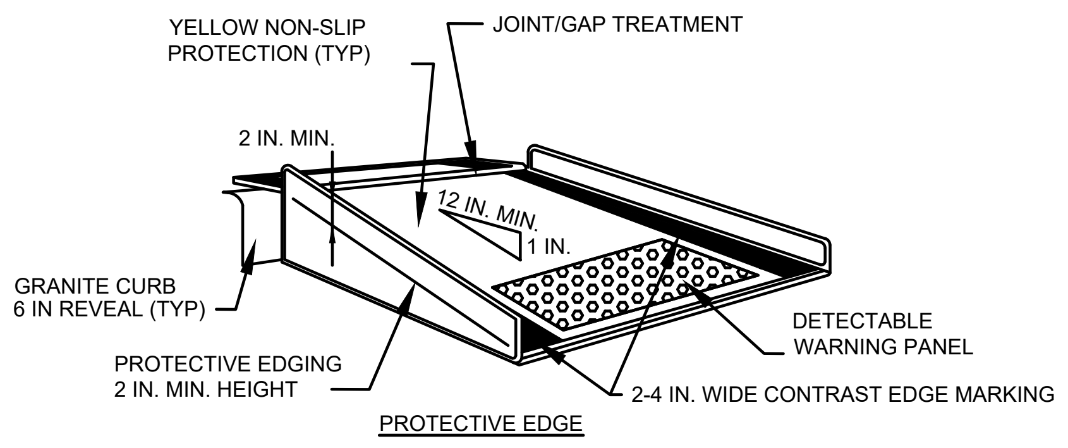
* THERE SHALL BE A 2 INCH GAP BETWEEN THE HAND-TRAILING EDGE AND ITS SUPPORT.

** A MAXIMUM 2 INCH GAP BETWEEN THE BOTTOM OF THE BOTTOM RAIL AND THE SURFACE MAY BE USED TO PROVIDE DRAINAGE.

*** THE HAND-TRAILING EDGE AND DETECTION PLATE SHALL BE CONTINUOUS THROUGHOUT THE LENGTH OF THE PATH SUCH THAT A PEDESTRIAN USER WITH A LONG CANE CAN FOLLOW IT.


JOINT/GAP TREATMENT
60x60 IN. MIN. TURNING AREA
2-4 IN. WIDE CONTRAST EDGE MARKING
YELLOW NON-SLIP PROTECTION (TYP)
2.0% SLOPE MAX
DETECTABLE EDGING 6 IN. MIN. HEIGHT
GRANITE CURB 6 IN REVEAL (TYP)
PROTECTIVE EDGING 2 IN. MIN. HEIGHT
CLEAR SPACE
12 IN. MIN.
1 IN.
DETECTABLE WARNING PANEL

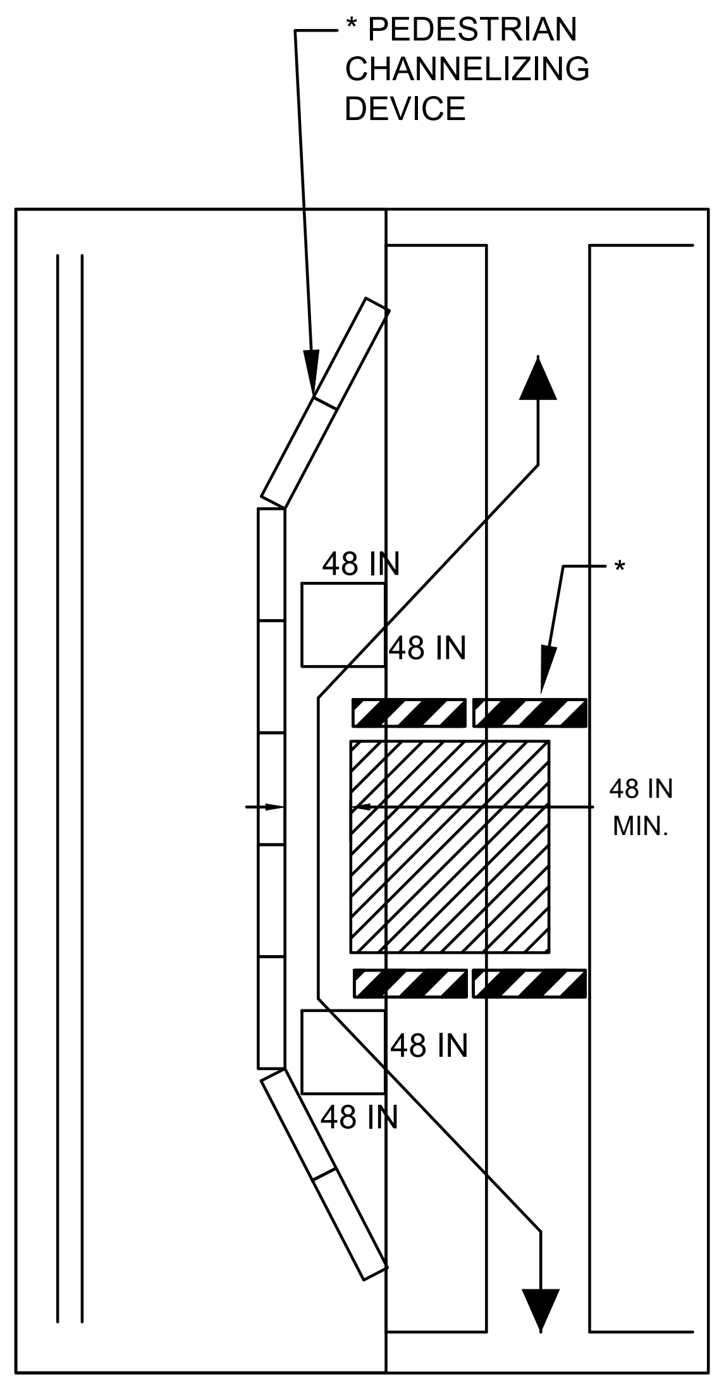
TEMPORARY CURB RAMP-PARALLEL TO CURB


YELLOW NON-SLIP PROTECTION (TYP)
JOINT/GAP TREATMENT
2 IN. MIN.
12 IN. MIN.
1 IN.
GRANITE CURB 6 IN REVEAL (TYP)
DETECTABLE WARNING PANEL
PROTECTIVE EDGING 2 IN. MIN. HEIGHT
2-4 IN. WIDE CONTRAST EDGE MARKING
PROTECTIVE EDGE

TEMPORARY CURB RAMP-PERPENDICULAR TO CURB

NOTES:

1. CURB RAMPS SHALL BE 60 IN. MINIMUM WIDTH WITH A FIRM, STABLE AND NON-SLIP SURFACE.
2. PROTECTIVE EDGING WITH A 2 IN. MINIMUM HEIGHT SHALL BE INSTALLED WHEN THE CURB RAMP OR LANDING PLATFORM HAS A VERTICAL DROP OF 6 IN. OR GREATER OR HAS A SIDE APRON SLOP STEEPER THAN 1:3 (33%). PROTECTIVE EDGING SHOULD BE CONSIDERED WHEN THE CURB RAMPS OR LANDING PLATFORMS HAVE A VERTICAL DROP OF 3 IN. OR MORE.
3. DETECTABLE EDGING WITH 6 IN. MINIMUM HEIGHT AND CONTRASTING COLOR SHALL BE INSTALLED ON ALL CURB RAMP LANDINGS WHERE THE WALKWAY CHANGES DIRECTION (TURNS).
4. THE CURB RAMP WALKWAY AND LANDING AREA SURFACE SHALL BE OF A SOLID CONTINUOUS CONTRASTING COLOR ABUTTING UP TO THE EXISTING SIDEWALK.
5. CURB RAMPS AND LANDINGS SHOULD HAVE A 1:50 (2%) MAX CROSS-SLOPE.
6. CLEAR SPACE OF 48x48 IN. MINIMUM SHALL BE PROVIDED ABOVE AND BELOW THE CURB RAMP.
7. WATER FLOW IN THE GUTTER SYSTEM SHALL HAVE MINIMAL RESTRICTION.
8. LATERAL JOINTS OR GAPS BETWEEN SURFACES SHALL BE LESS THAN 0.5 IN. WIDTH.
9. CHANGES BETWEEN SURFACE HEIGHTS SHOULD NOT EXCEED 0.5 IN. LATERAL EDGES SHOULD BE VERTICAL UP TO 0.25 IN. HIGH, AND BEVELED AT 1:2 BETWEEN 0.25 IN. AND 0.5 IN. HEIGHT.
10. IF A TEMPORARY PEDESTRIAN RAMP LEADS TO A CROSSWALK, THEN A DETECTABLE WARNING PAD MUST BE ADHERED TO THE BASE OF THE RAMP. IF IT LEADS TO A PROTECTED PEDESTRIAN BYPASS THAT DOES NOT CONFLICT WITH VEHICULAR TRAFFIC, THEN A PAD SHALL NOT BE INSTALLED ON THE RAMP.



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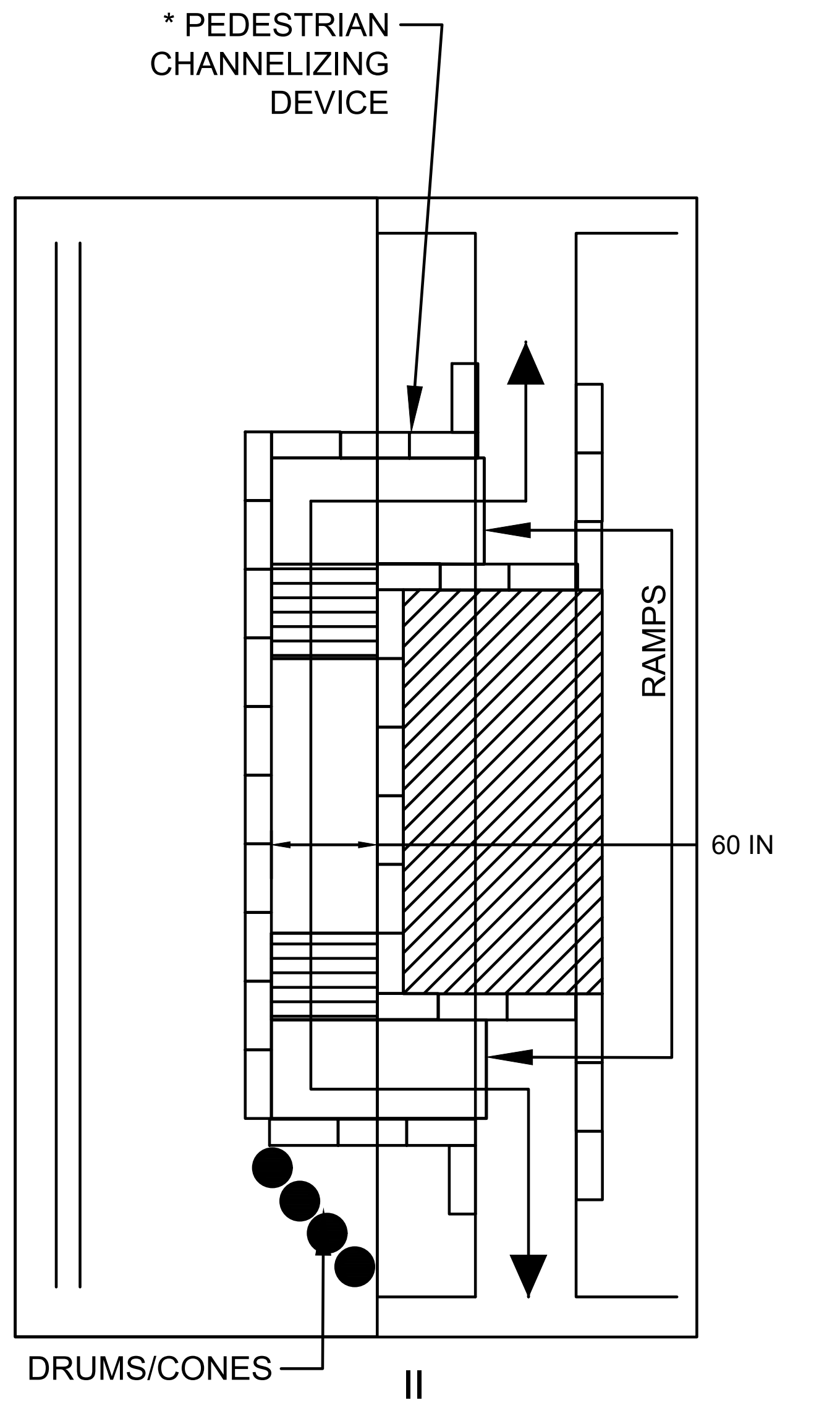

II

- DETAIL I IS CONSIDERED AN EXAMPLE OF A SHORT TERM CLOSURE AND PEDESTRIAN ASSISTANCE (PERSONEL) TO NAVIGATE AROUND THE CLOSURE/WORK AREA COULD BE CONSIDERED AS AN OPTION IN PLACE OF PROVIDING ADA/AAB DEVICES. DETAIL II IS CONSIDERED AN EXAMPLE OF A LONG TERM CLOSURE THAT WOULD REQUIRE ADDITIONAL ADA/AAB COMPLIANT DEVICES. IF A SIDEWALK CLOSURE OR RESTRICTION LASTS FOR MORE THAN ONE (1) WORK SHIFT THEN ADA/AAB COMPLIANCE SHALL BE FOLLOWED.
- WHEN EXISTING PEDESTRIAN FACILITIES ARE DISRUPTED, CLOSED, OR RELOCATED IN A TTC ZONE, TEMPORARY FACILITIES SHALL BE PROVIDED AND THEY SHALL BE DETECTABLE AND INCLUDE ACCESSIBILITY FEATURES CONSISTENT WITH THE FEATURES PRESENT IN THE EXISTING PEDESTRIAN FACILITY.
- A PEDESTRIAN CHANNELIZING DEVICE THAT IS DETECTABLE BY A PERSON WITH A VISUAL DISABILITY TRAVELING WITH THE AID OF A LONG CANE SHALL BE PLACED ACROSS THE FULL WIDTH OF THE CLOSED SIDEWALK.
- WHEN USED, TEMPORARY RAMPS SHALL COMPLY WITH AMERICANS WITH DISABILITIES ACT (SEE FIGURES PED-1 & PED-2).
- THE ALTERNATE PATHWAY SHOULD HAVE A SMOOTH CONTINUOUS HARD SURFACE FOR THE ENTIRE LENGTH OF THE TEMPORARY PEDESTRIAN FACILITY.
- THE TEMPORARY SIDEWALK SHOULD BE A MINIMUM OF 4 FEET WIDE. IF THE SIDEWALK EXEEDS 200 FEET THEN A 5 FOOT BE 5 FOOT PASSING ZONE SHALL BE PROVIDED.
- THE PROTECTIVE REQUIREMENTS OF A TTC WORK ZONE MAY HAVE AN IMPACT IN DETERMINING THE NEED FOR TEMPORARY TRAFFIC BARRIERS AND THEIR USE IN PROVIDING PEDESTRIAN DELINEATION SHOULD BE BASED ON ENGINEERING JUDGMENT .
- CONTROLS ONLY FOR PEDESTRIAN TRAFFIC ARE SHOWN; VEHICULAR TRAFFIC SHOULD BE HANDLED AS SHOWN ELSEWHERE. THESE DETAILS ARE USED IN CONJUNCTION WITH THE PROPOSED LANE CLOSURE DETAILS AND DURING CONSTRUCTION STAGING, AS DETERMINED BY THE ENGINEER.
- AUDIBLE INFORMATION DEVICES SHOULD BE CONSIDERED WHERE MIDBLOCK CLOSINGS AND CHANGED CROSSWALK AREAS CAUSE INADEQUATE COMMUNICATION TO BE PROVIDED TO PEDESTRIANS WHO HAVE VISUAL DISABILITIES.
- EXISTING AUDIBLE DEVICES NO LONGER APPLICABLE DUE TO CONSTRUCTION SHALL BE DISABLED.

AUDIBLE DEVICES

FOR LONG TERM SIDEWALK CLOSURES (AT A MINIMUM OVERNIGHT) A FORM OF SPEECH MESSAGING FOR PEDESTRIANS WITH VISUAL DISABILITIES SHALL BE PROVIDED. AUDIBLE INFORMATION DEVICES SUCH AS DETECTABLE BARRIERS OR BARRICADES AND OTHER PASSIVE PEDESTRIAN ACTIVATION (MOTION ACTIVATED) DEVICES SHOULD BE CONSIDERED FOR THESE CASES. THESE AUDIBLE DEVICES CAN BE MOUNTABLE OR STAND ALONE.

NUMBER	DATE	MADE BY	CHECKED BY	REVISIONS

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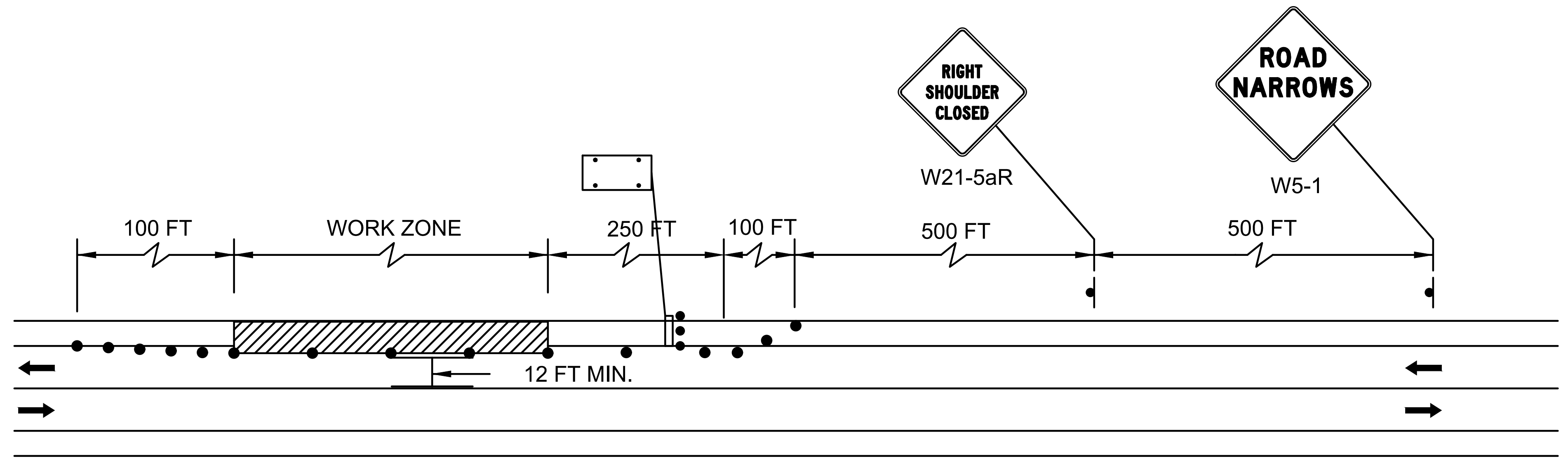
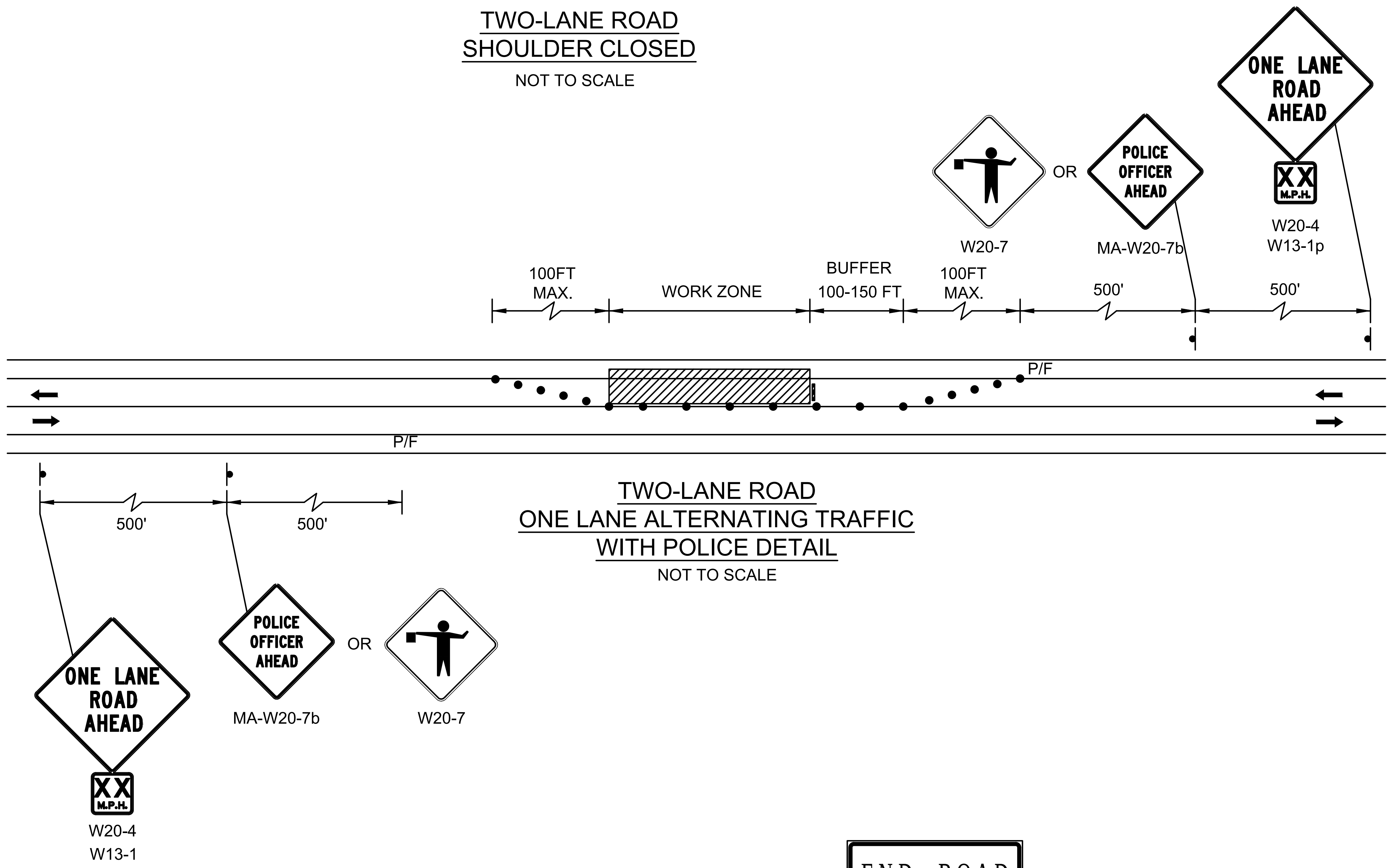


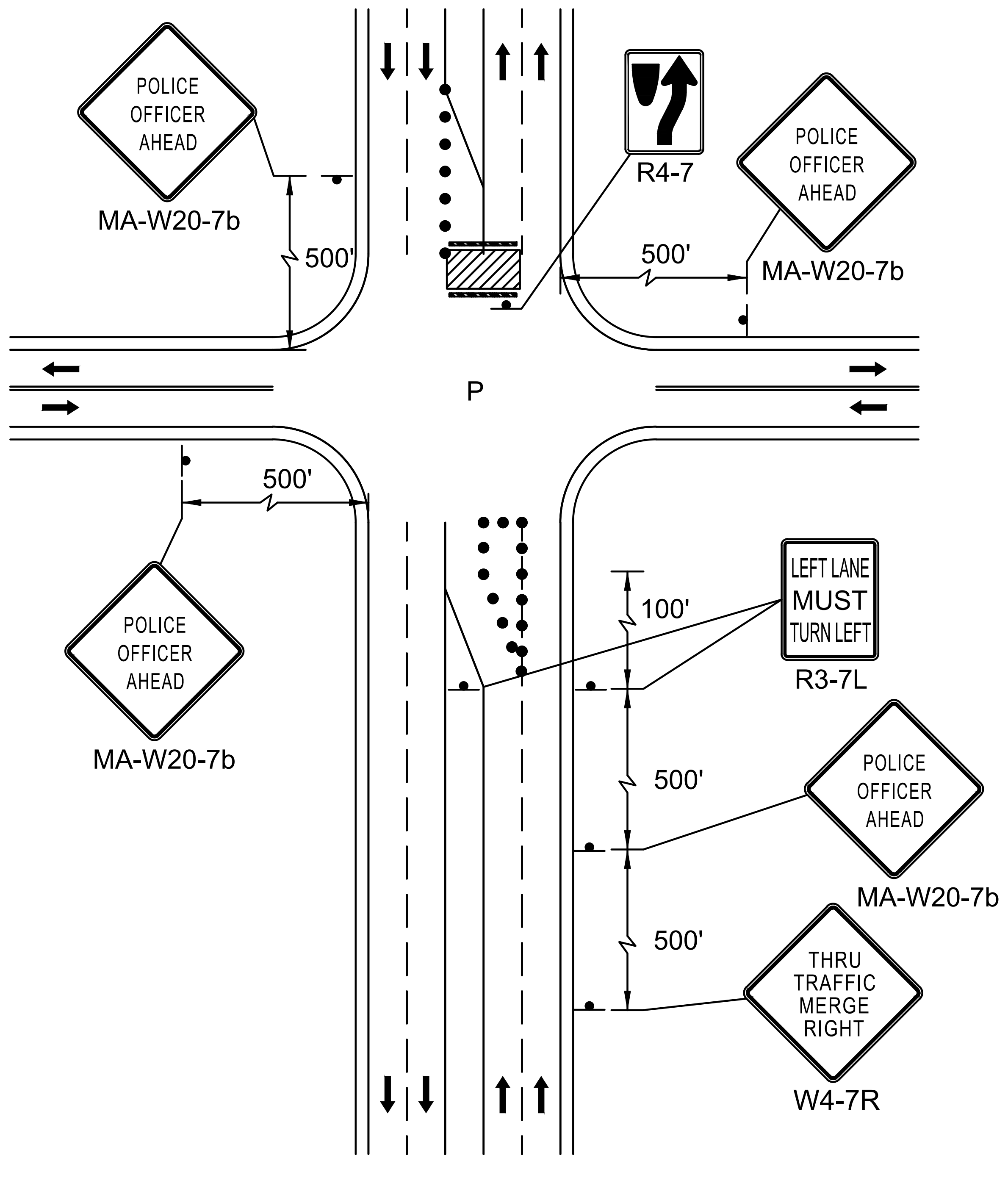
TWO-LANE ROAD SHOULDER CLOSED

NOT TO SCALE



TWO-LANE ROAD ONE LANE ALTERNATING TRAFFIC WITH POLICE DETAIL

NOT TO SCALE



MULTI-LANE APPROACH MULTIPLE LANE CLOSURE

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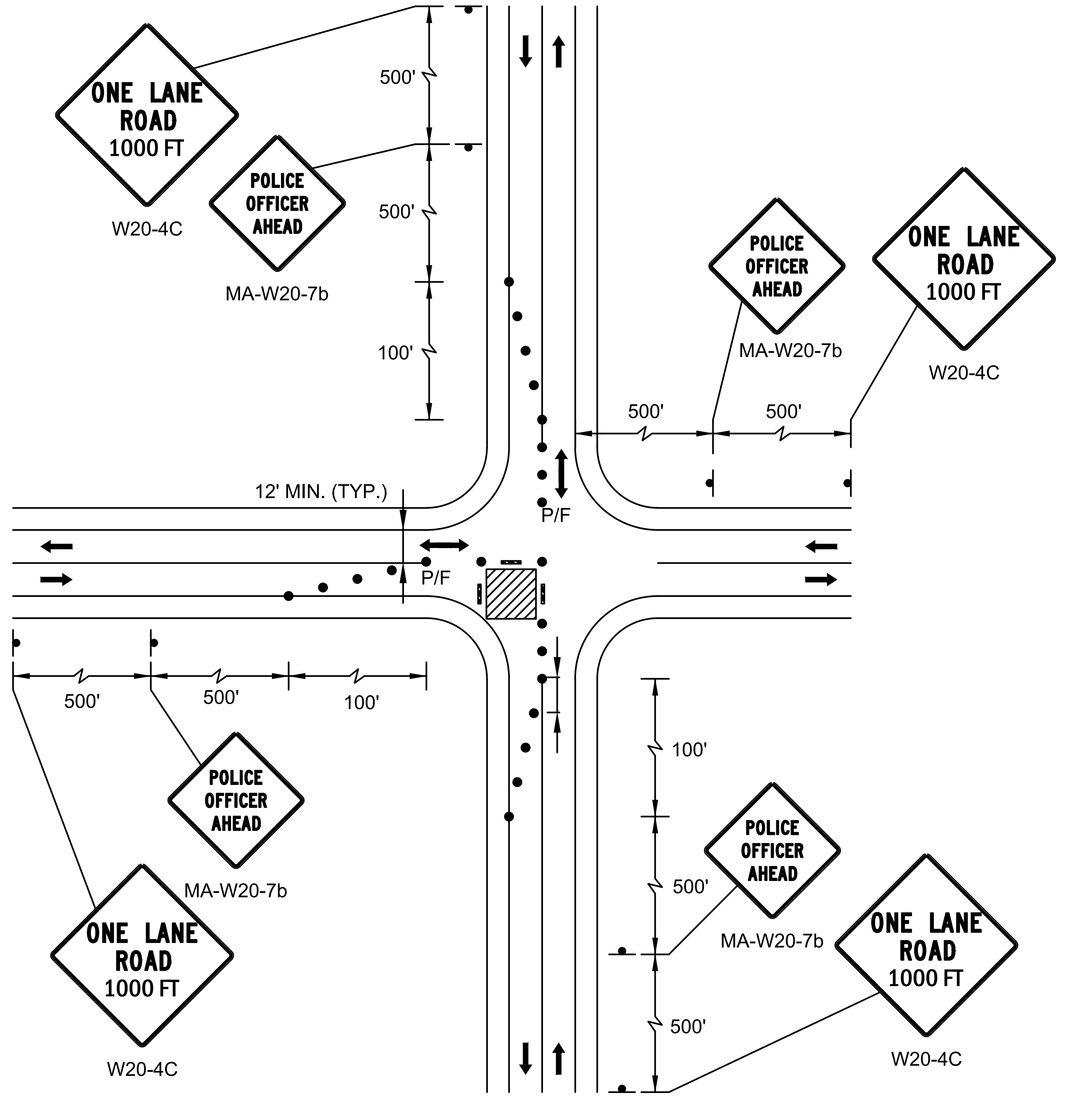

INTERSECTION WITH LANE CLOSURE

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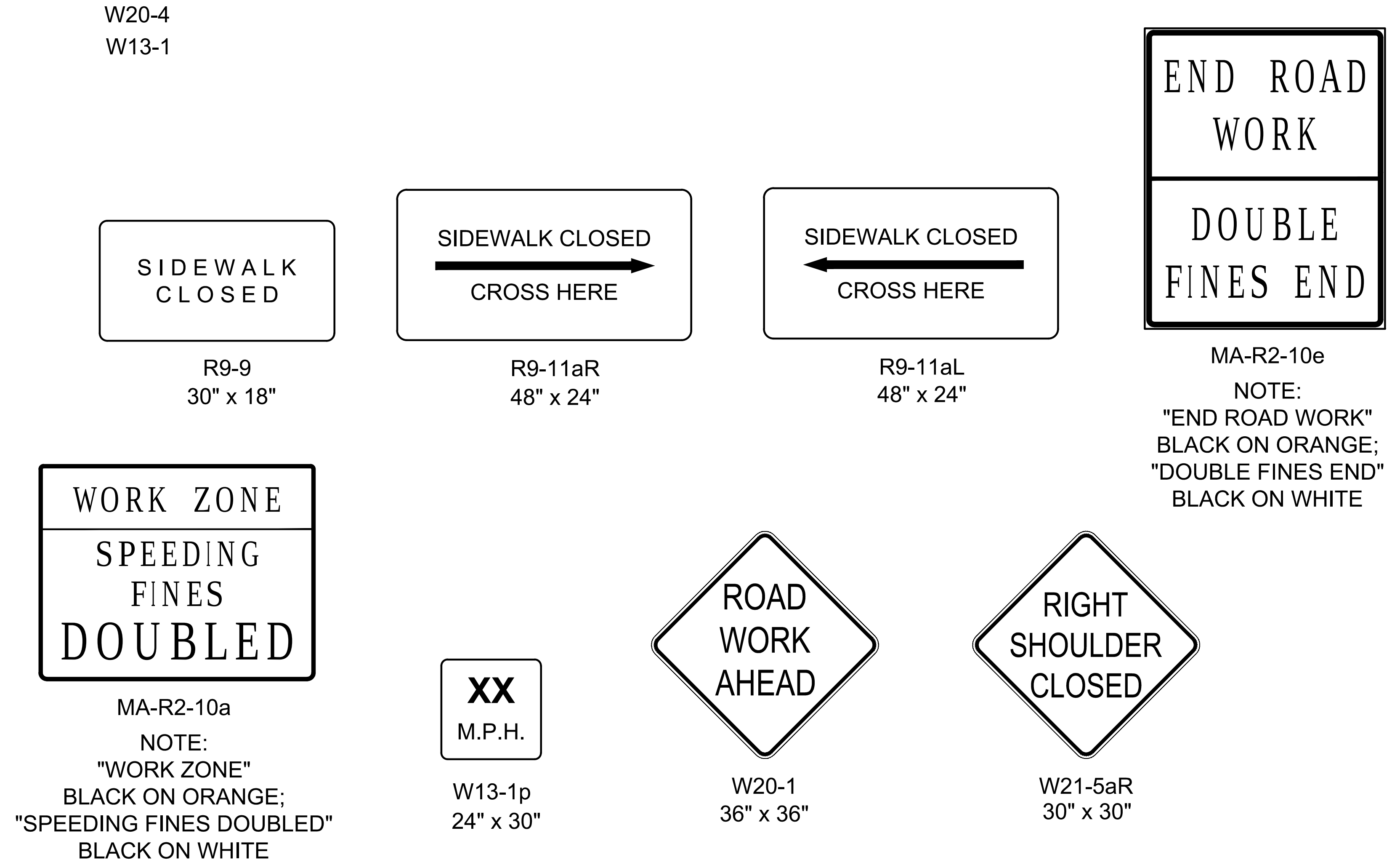

NOTE:
"END ROAD WORK"
BLACK ON ORANGE;
"DOUBLE FINES END"
BLACK ON WHITE

NOTE:
"WORK ZONE"
BLACK ON ORANGE;
"SPEEDING FINES DOUBLED"
BLACK ON WHITE

CONSTRUCTION SIGNS

NOT TO SCALE

TAPER LENGTH

SPEED LIMIT	**FORMULA**
40 MPH or Less	$L=WS^2/60$
45 MPH or Greater	L=W x S

L = TAPER LENGTH IN FEET
W = WIDTH OF OFFSET IN FEET
S = POSTED SPEED IN MPH

SAFETY SIGNING FOR CONSTRUCTION OPERATIONS

LEGEND	TYPE	SIZE	COLOR			UNIT AREA	NO. SIGNS	TOTAL AREA	POSTS
			BACKGROUND	LEGEND	BORDER				
WORK ZONE SPEEDING FINES...	MA-R2-10a	48" x 36"	WHITE	BLACK	BLACK	12 SF	8	96 SF	P-5: 8
END ROAD WORK	MA-R2-10e	36" x 48"	WHITE/ORANGE**	BLACK	BLACK	12 SF	10	120 SF	P-5: 10
LEFT LANE MUST TURN LEFT	R3-7L	30" x 30"	WHITE	BLACK	BLACK	6.3 SF	2	12.5 SF	P-5: 2
RIGHT LANE MUST TURN RIGHT	R3-7R	30" x 30"	WHITE	BLACK	BLACK	6.3 SF	2	12.5 SF	P-5: 2
KEEP RIGHT	R4-7	24" x 30"	WHITE	BLACK	BLACK	5 SF	1	5 SF	P-5: 1
SIDEWALK CLOSED	R9-9	30" x 18"	WHITE	BLACK	BLACK	3.8 SF	2	7.5 SF	P-5: 2
SIDEWALK CLOSED CROSS HERE	R9-11a	48" x 24"	WHITE	BLACK	BLACK	8 SF	2	16 SF	P-5: 2
LEFT LANE ENDS MERGE	W4-2L	36" x 36"	ORANGE**	BLACK	BLACK	9 SF	2	18 SF	P-5: 2
RIGHT LANE ENDS MERGE	W4-7R	36" x 36"	ORANGE**	BLACK	BLACK	9 SF	1	9 SF	P-5: 1
THRU TRAFFIC MERGE LEFT	W4-7L	36" x 36"	ORANGE**	BLACK	BLACK	9 SF	1	9 SF	P-5: 1
ROAD NARROWS	W5-1	36" x 36"	ORANGE**	BLACK	BLACK	9 SF	2	18 SF	P-5: 2
BUMP	W8-1	36" x 36"	ORANGE**	BLACK	BLACK	9 SF	2	18 SF	P-5: 2
PAVEMENT ENDS	W8-3	36" x 36"	ORANGE**	BLACK	BLACK	9 SF	2	18 SF	P-5: 2
GROOVED PAVEMENT	W8-15	36" x 36"	ORANGE**	BLACK	BLACK	9 SF	2	18 SF	P-5: 2
STEEL PLATE AHEAD	W8-24	36" x 36"	ORANGE**	BLACK	BLACK	9 SF	2	18 SF	P-5: 2
PEDESTRIAN	W11-2	30" x 30"	ORANGE**	BLACK	BLACK	6.3 SF	4	25 SF	P-5: 4
ADVISORY SPEED	W13-1p	24" x 30"	ORANGE**	BLACK	BLACK	5 SF	4	20 SF	P-5: 4
DOWNWARD DIAGONAL ARROW	W16-7pL	24" x 12"	ORANGE**	BLACK	BLACK	2 SF	4	8 SF	P-5: 4
ROAD WORK AHEAD	W20-1	36" x 36"	ORANGE**	BLACK	BLACK	9 SF	5	45 SF	P-5: 5
ROAD WORK AHEAD 1500FT	W20-1B	36" x 36"	ORANGE**	BLACK	BLACK	9 SF	3	27 SF	P-5: 3
ONE LANE ROAD	W20-4	36" x 36"	ORANGE**	BLACK	BLACK	9 SF	2	18 SF	P-5: 2
ONE LANE ROAD 1000 FT	W20-4C	36" x 36"	ORANGE**	BLACK	BLACK	9 SF	4	36 SF	P-5: 4
LEFT LANE CLOSED XXX	W20-5L	36" x 36"	ORANGE**	BLACK	BLACK	9 SF	2	18 SF	P-5: 1
FLAGGER	W20-7	36" x 36"	ORANGE**	BLACK	BLACK	9 SF	2	18 SF	P-5: 2
POLICE OFFICER AHEAD	MA-W20-7b	36" x 36"	ORANGE**	BLACK	BLACK	9 SF	4	36 SF	P-5: 4
RIGHT SHOULDER CLOSED	W21-5aR	36" x 36"	ORANGE**	BLACK	BLACK	9 SF	2	18 SF	P-5: 2
					TOTAL AREA OF SIGNS:			664.5 SF	P-5: 75

* NO. OF SIGNS ARE ESTIMATED FOR BIDDING PURPOSES ONLY

** ALL CONSTRUCTION SIGNAGE SHALL HAVE FLUORESCENT ORANGE BACKGROUND

NUMBER	DATE	MADE BY	CHECKED BY	REVISIONS

DRAWN BY: JC
DESIGNED BY: JC
CHECKED BY: KH

REGISTERED PROFESSIONAL
KIEN Y. HO
CIVIL ENGINEER
No. 46731
Kien Y. Ho
2/8/21

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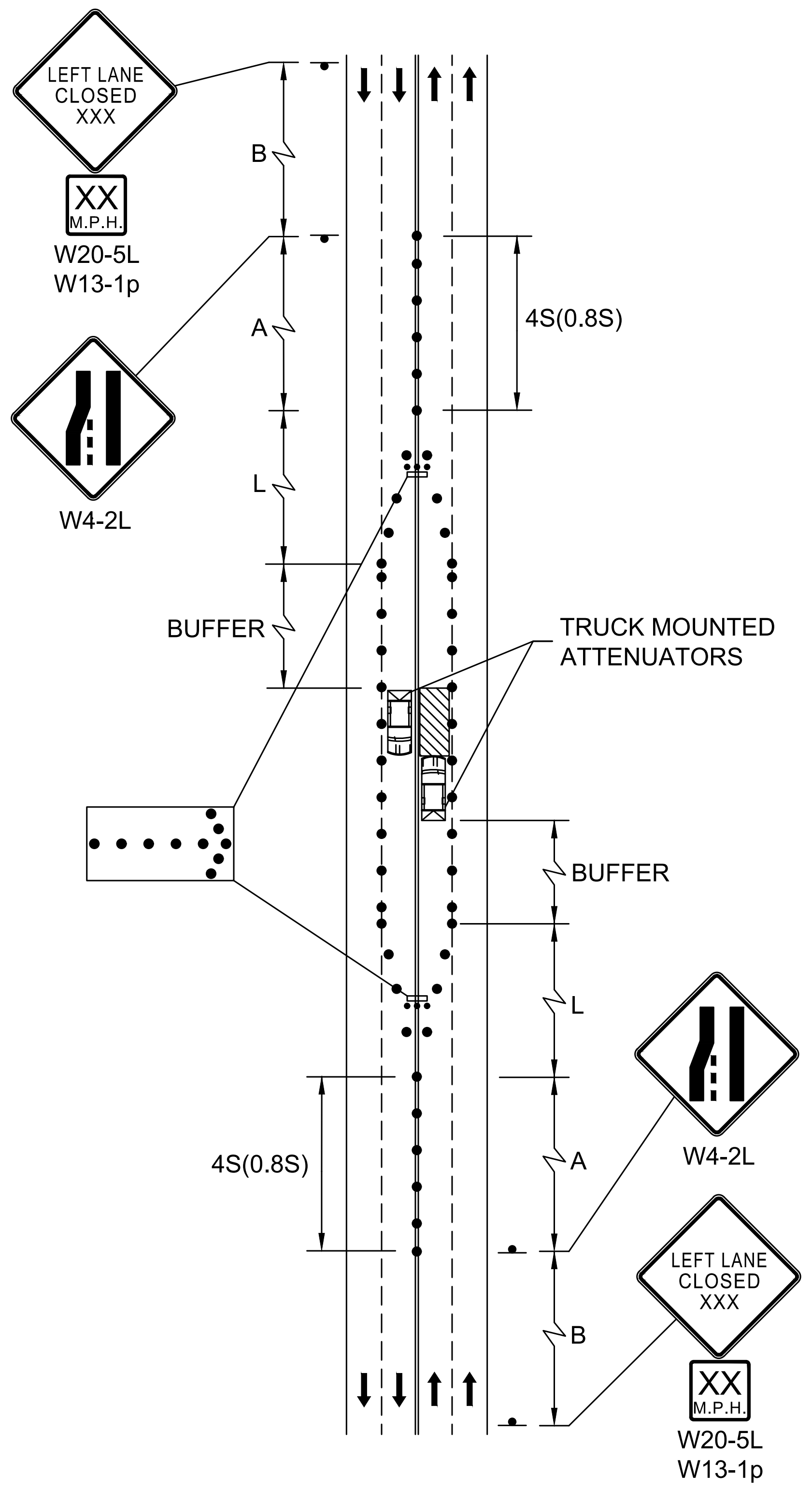
TITLE
TOWN CENTER IMPROVEMENTS
TEMPORARY TRAFFIC CONTROL PLAN
LEXINGTON, MASSACHUSETTS

BETA JOB NO. 6331
ISSUE DATE 02/05/2021
SHEET NO. 47 OF 92



MULTIPLE LANE ROAD INTERIOR LANE CLOSURE

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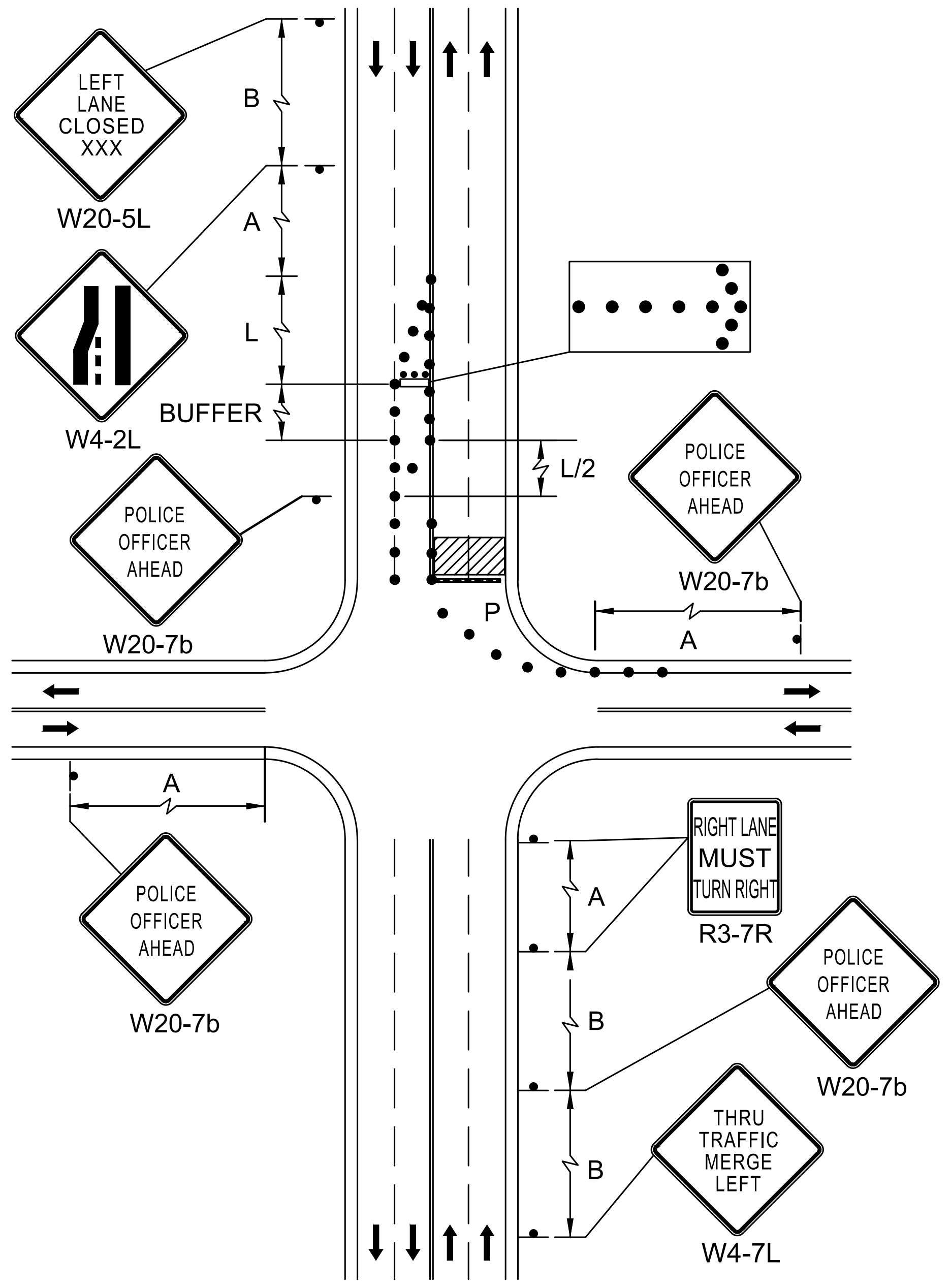

DOUBLE LANE APPROACH HALF ROAD CLOSURE

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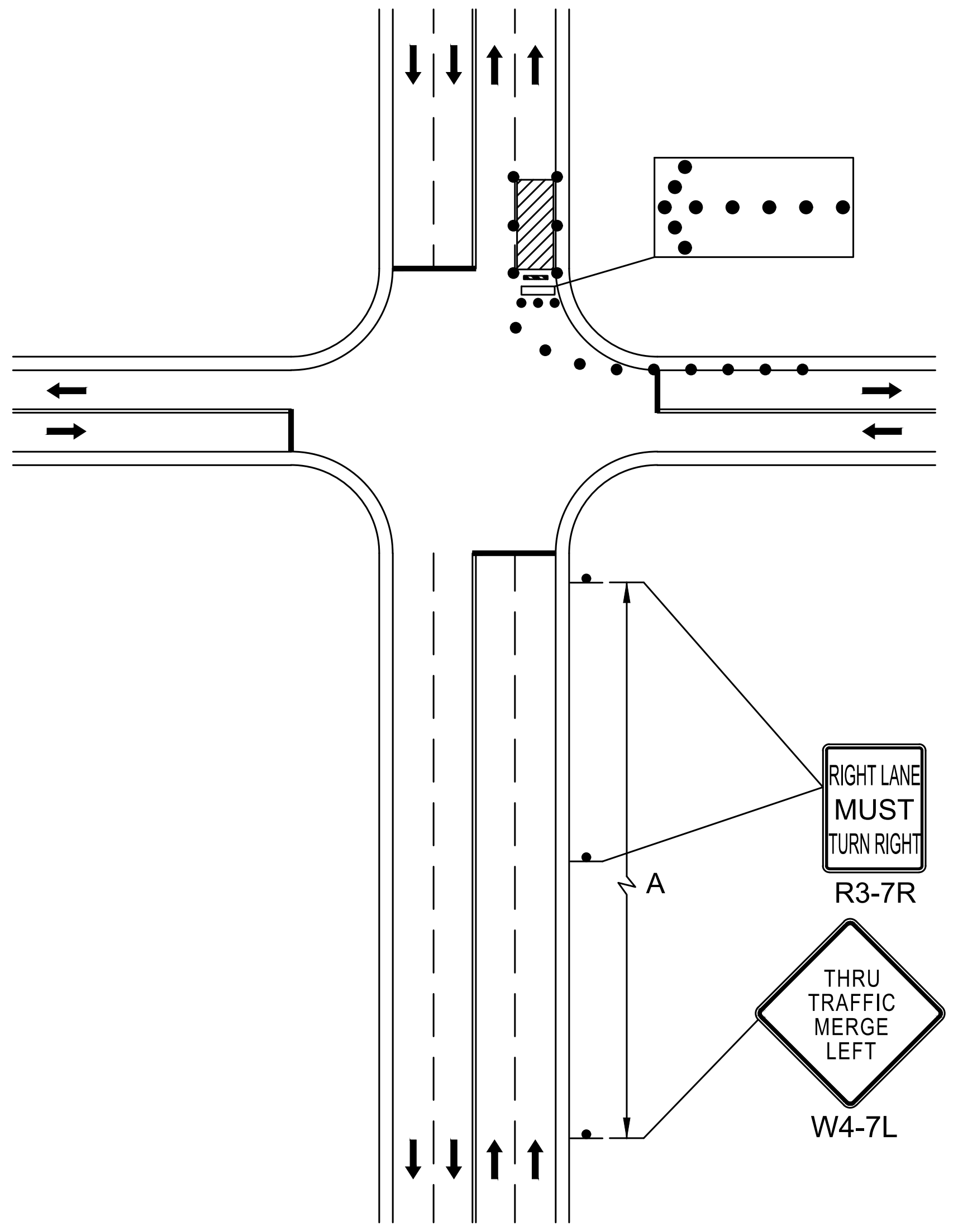

RIGHT LANE CLOSURE FAR SIDE OF INTERSECTION

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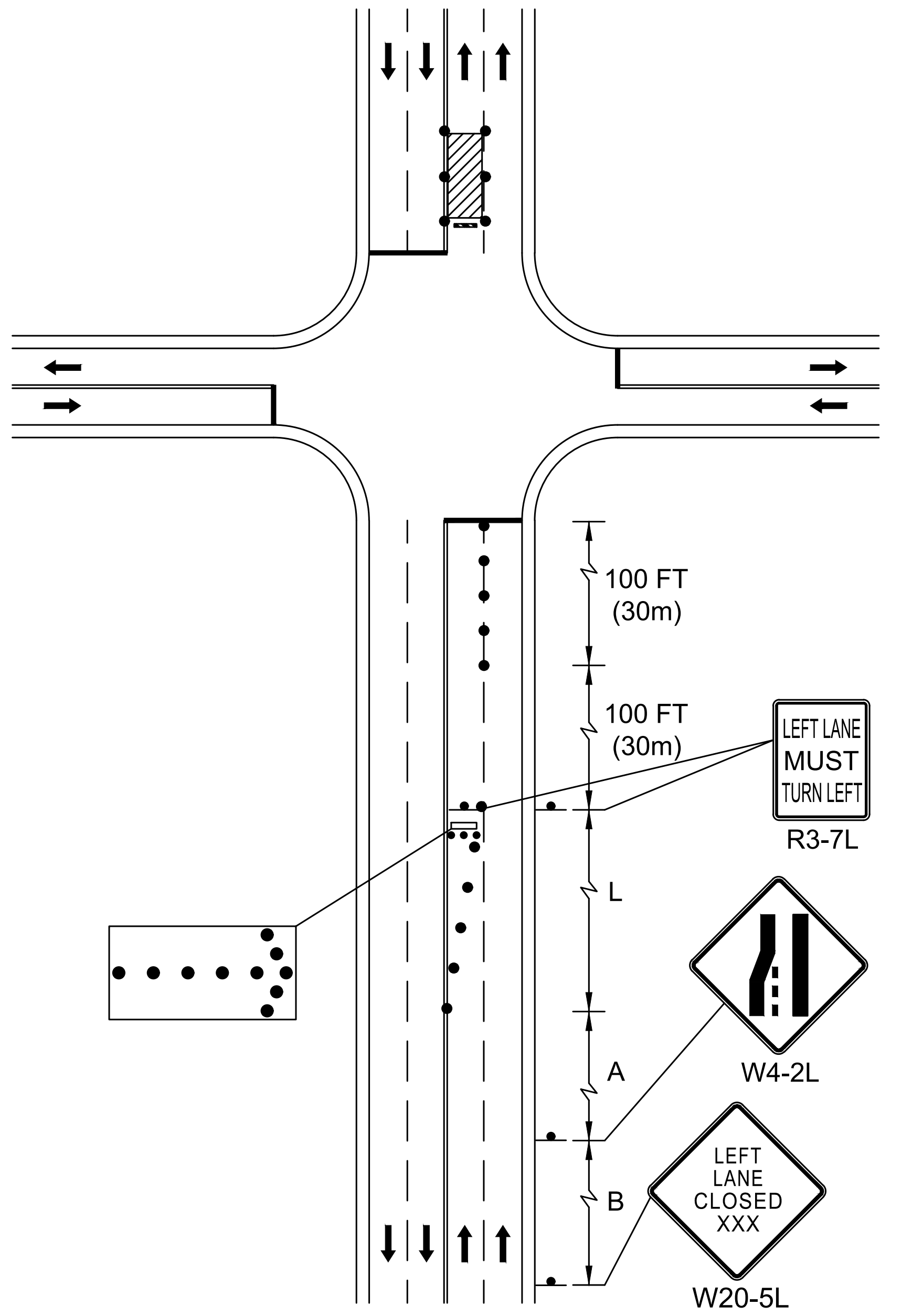

DOUBLE LANE APPROACH FAR SIDE CLOSURE INSIDE LANE

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MASSACHUSETTS AVENUE - WORK AREAS 1, 2, 3, 4A, 4B, 5, 9, 10, 11, 12, 15, 16

WORK AREAS 1 - 19 SIDEWALK CONSTRUCTION

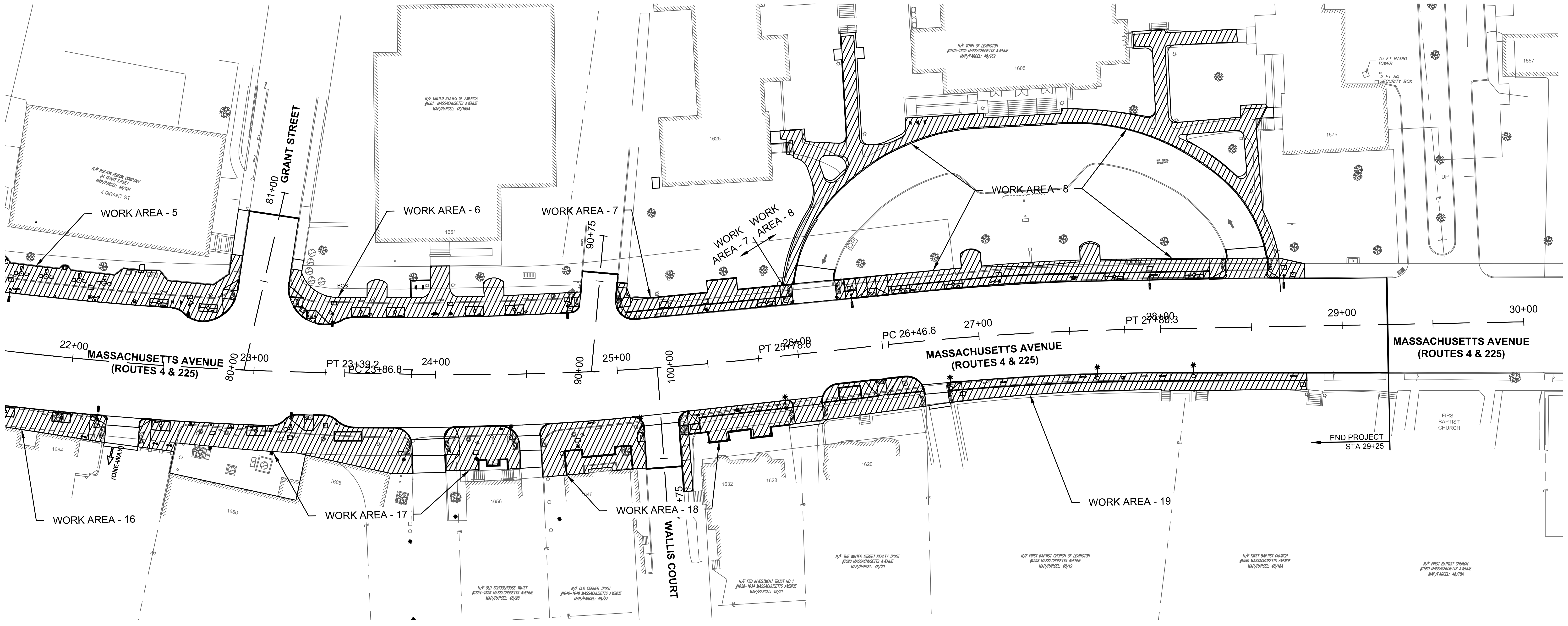
- MAINTAIN ACCESS TO ALL ABUTTERS ALONG THE SIDEWALK
- MAINTAIN A 12 FOOT MINIMUM TRAVEL LANE AT ALL TIMES
- INSTALL TRAFFIC CONTROL DEVICES AS SHOWN ON THE PLANS AND AS REQUIRED BY THE ENGINEER
- COORDINATE WITH TOWN OF LEXINGTON FOR REMOVAL OF EXISTING PARKING METERS (POSTS TO BE REMOVED BY CONTRACTOR WITH SIDEWALK EXCAVATION)
- EXCAVATE EXISTING SIDEWALKS. MAINTAIN PEDESTRIAN ACCESS AS REQUIRED
- ALL PARKING TO BE MAINTAINED, EXCEPT WITHIN EACH WORK AREA BLOCK
- REMOVE AND RESET AND/OR PLACE GRANITE CURBING
- PLACE NEW LIGHT POLE & METER FOUNDATIONS, CONDUIT AND HANDHOLES
- PLACE SILVA CELLS, AERATION, IRRIGATION, AND STRUCTURAL SOIL, TREE GRATES
- PLACE NEW BRICK OR CEMENT CONCRETE SIDEWALKS
- EXISTING STREET LIGHTING TO BE MAINTAINED UNTIL NEW LIGHTING IS INSTALLED & OPERATIONAL
- THE CONTRACTOR WILL BE REQUIRED TO COMPLETE ALL OF THE ABOVE WORK IN EACH WORK AREA PRIOR TO BEGINNING WORK IN AN ADDITIONAL WORK AREA

GENERAL WORK NOTES

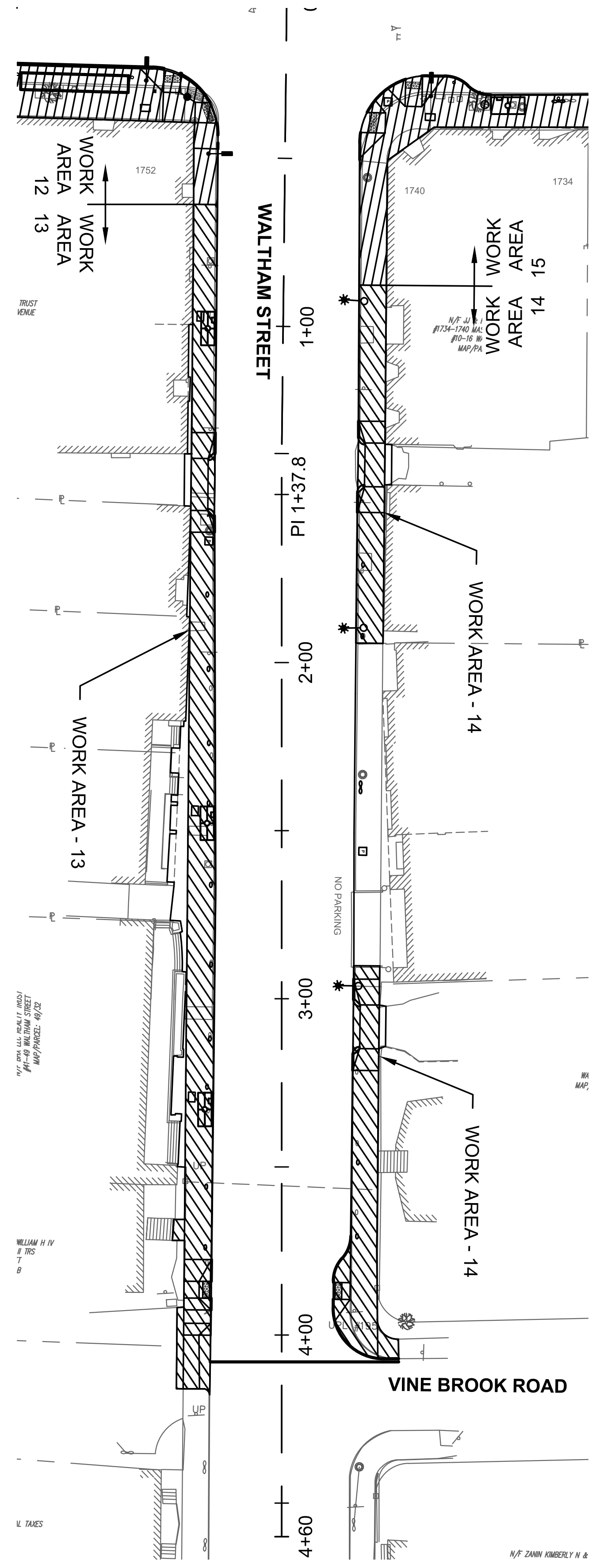
- THE EXISTING STREET LIGHTING SHALL REMAIN IN PLACE UNTIL THE NEW LIGHTING SYSTEM IS INSTALLED AND OPERATIONAL WITHIN EACH DESIGNATED WORK AREA
- THE CONTRACTOR, WITH APPROVAL FROM THE ENGINEER, SHALL BE ALLOWED TO INSTALL SURFACE MOUNTED STREET FURNITURE AND LIGHT POLES AS THEY BECOME AVAILABLE
- THE CONTRACTOR, WITH APPROVAL FROM THE ENGINEER, SHALL BE ALLOWED TO REMOVE EXISTING LIGHT POLES & REPLACE SIDEWALK PANELS OR BRICK IN THOSE AREAS AFTER THE NEW LIGHTING SYSTEM IS INSTALLED & OPERATIONAL

PRE-CONSTRUCTION

- MAINTAIN ACCESS TO ABUTTERS ON MASSACHUSETTS AVENUE.
- INSTALL ADVANCE WARNING SIGNS AND OTHER TEMPORARY TRAFFIC CONTROL DEVICES.
- INSTALL TRAFFIC CONTROL DEVICES AS SHOWN ON THE PLANS AND AS REQUIRED BY THE ENGINEER.
- RELOCATE SELECT UTILITIES WITHIN PROJECT LIMITS. MAINTAIN CONNECTIONS TO ABUTTING PROPERTIES.
- SITE PREPARATION AS DESCRIBED IN THE SPECIAL PROVISIONS.



MASSACHUSETTS AVENUE - WORK AREAS 6, 7, 8, 17, 18, 19



WALTHAM STREET
WORK AREAS 13, 14

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CIVIL ENGINEER
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TOWN CENTER IMPROVEMENTS
CONSTRUCTION PHASING PLAN
LEXINGTON, MASSACHUSETTS

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PROPOSED LEGEND

- LIGHTING FIXTURE - TYPE A
- LIGHTING FIXTURE - TYPE B
- LIGHTING FIXTURE - TYPE C w/ FLOOD
- LIGHTING FIXTURE - TYPE D
- LIGHTING FIXTURE - TYPE E
- LIGHTING FIXTURE - TYPE F
- B1 BENCH - B1
- B2 BENCH - B2
- C CHAIR - C1
- CAROUSEL TABLE w/ SEATS
- CELL PHONE CHARGING STATION
- WOOD PLANTER
- TRASH RECEPTACLE
- TR TR BIG BELLY WASTE & RECYCLE SYSTEM
- BIKE RACK - A (IN GROUND MOUNT)
- BIKE RACK - A (SURFACE MOUNT)
- BIKE RACK - B (IN GROUND MOUNT)
- BIKE RACK - B (SURFACE MOUNT)
- PARKING METER
- PARKING KIOSK (ADD ALTERNATE)
- FLAG POLE HOLDER
- TREE GRATE - TYPE A
- TREE GRATE - TYPE B

N
MERIAM STREET
41+90
41+00
40+00
11+59.5
51.66 LT
BIKE RACK - TYPE B (IN GROUND MOUNT)
R&R EXIST. BRICK PAVEMENT MATCH EXIST PATTERN (TYP)
BIG BELLY WASTE AND RECYCLING SYSTEM (TYP)
WOOD BENCH - TYPE B-1 (TYP)
SEE MODULAR SOIL CELL PLANS
R&R EXIST. BRICK PAVEMENT MATCH EXIST PATTERN (TYP)
BIKE RACK - TYPE B (3) (IN GROUND MOUNT)
TRASH RECEPTACLE (TYP)
R&R BENCH (TYP)
1841
1833
12+98.6
29.76 LT
4'
4'
HANDHOLES (TYP)
DEPOT SQUARE (ONE-WAY)
51+00
50+00
EMERY PARK
WOOD PLANTER (TYP)
BRICK PAVING - HERRINGBONE PATTERN (TYP)
RET CLOCK TOWER
R&R BENCH (TYP)
TREE GRATE - TYPE A (TYP)
EXISTING FIXTURES (LIGHTING FIXTURE - TYPE D) TO REMAIN, CHANGE SOURCE TO LED AND REPAINT
R&S PLANTER (TYP)
DEPOT SQUARE (ONE-WAY)
53+00
R&R MB
LIGHTING FIXTURE - TYPE A (TYP)
TREE PLANTER (TYP)
R&R MB
BIG BELLY WASTE AND RECYCLING SYSTEM (TYP)
WOOD CHAIR (TYP)
WOOD BENCH - TYPE B-1 (TYP)
SHRUB PLANTER (TYP)
1793
1787
10+00
11+00
12+00
13+00
14+00
15+00
16+00
52+00
MASSACHUSETTS AVENUE (ROUTES 4 & 225)
WOOD PLANTER (TYP)
R&S PLANTER (TYP)
13+85.0
26.85 RT
13+69.0
26.86 RT
13+89.0
30.23 RT
A
13+69.0
32.69 RT
13+85.0
32.68 RT
R&R BENCH AND CONCRETE PAD
R&S BIKE RACK (TYP)
TREE GRATE - TYPE A (TYP)
STREET LIGHT - TYPE B (TYP)
BRICK PAVING - HERRINGBONE PATTERN (TYP)
1842-1844
1838
R&S TRASH RECEPTACLE (TYP)
BENCH PLANTER - A SEE BENCH PLANTER DETAIL SHEETS (TYP)
1822
BIKE RACK - TYPE B (IN GROUND MOUNT)
LIGHTING FIXTURE - TYPE E
R&R MB
PARKING PAY STATION (TYP (ADD ALTERNATE)
TRASH RECEPTACLE (TYP)
B
1810
1806
LIGHTING FIXTURE - TYPE C w/FLOOD (TYP)
1794
BENCH PLANTER - B
1792
1788
1780
MATCH LINE
MUZZEY STREET (ONE-WAY)
61+00
CARY MEMORIAL LIBRARY
CLARKE STREET
60"
60"
24"
20"
30"
42"
2"
32"
20"
4"
4"
6"
20"
14"
24"
7"
5"

CONTINUED ON SHEET NO. 51

EXISTING ITEMS TO BE REMOVED AND STACKED (R&S)
- METAL TRASH RECEPTACLES
- BIG BELLY TRASH & RECYCLING UNITS
- WOOD PLANTERS (½ WHISKEY BARRELS)
- BIKE RACKS

GENERAL NOTES:

1. SEE GRANITE CURB PLANTER DETAIL SHEETS FOR BENCH, SHRUB, AND TREE PLANTERS.
2. SEE MODULAR SOIL CELL ENLARGEMENTS FOR LAYOUT OF MODULAR SOIL CELLS.
3. SEE PLANTING PLANS FOR LAYOUT OF STRUCTURAL SOIL.
4. SEE PLANTING PLANS FOR LAYOUT OF TREE AERATION SYSTEM ON SOUTH SIDE OF MASS. AVE.

NUMBER	DATE	MADE BY	CHECKED BY	REVISIONS

DRAWN BY: AP
DESIGNED BY: KC
CHECKED BY: DJ

REGISTERED PROFESSIONAL
KIEN Y. HO
CIVIL ENGINEER
2/8/21

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SITE IMPROVEMENT PLAN
LEXINGTON, MASSACHUSETTS

BETA JOB NO. 6331
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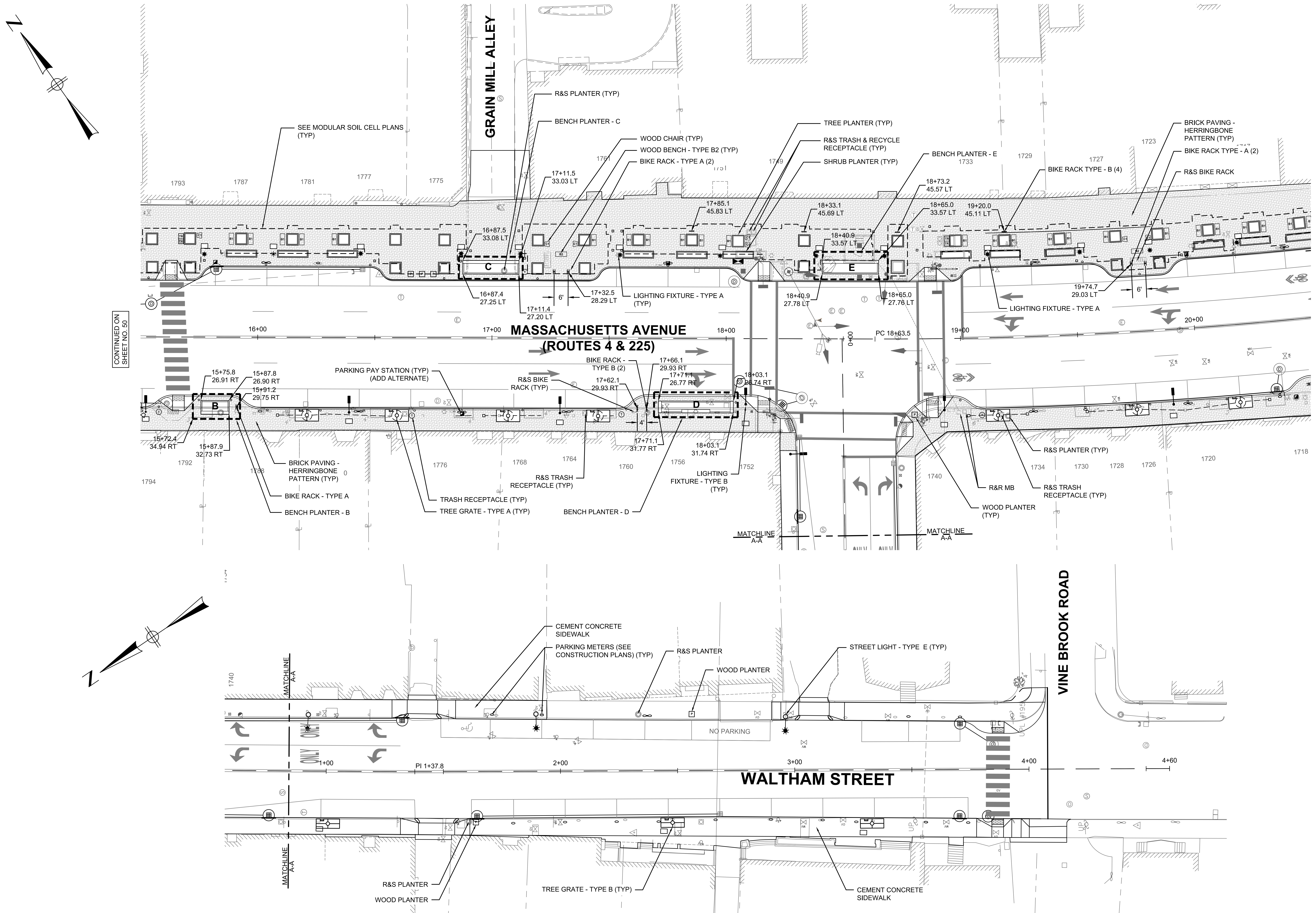

PROPOSED LEGEND

✷	LIGHTING FIXTURE - TYPE A
▬—●	LIGHTING FIXTURE - TYPE B
▬—●◁	LIGHTING FIXTURE - TYPE C w/ FLOOD
▨—●	LIGHTING FIXTURE - TYPE D
✷—○	LIGHTING FIXTURE - TYPE E
☼	LIGHTING FIXTURE - TYPE F
B1	BENCH - B1
B2	BENCH - B2
C	CHAIR - C1
⊙	CAROUSEL TABLE w/ SEATS
CS	CELL PHONE CHARGING STATION
P	WOOD PLANTER
Ⓣ	TRASH RECEPTACLE
TR TR	BIG BELLY WASTE & RECYCLE SYSTEM
H	BIKE RACK - A (IN GROUND MOUNT)
H	BIKE RACK - A (SURFACE MOUNT)
ǀ	BIKE RACK - B (IN GROUND MOUNT)
ǀ	BIKE RACK - B (SURFACE MOUNT)
∞	PARKING METER
◪	PARKING KIOSK (ADD ALTERNATE)
∘	FLAG POLE HOLDER
▭	TREE GRATE - TYPE A
▭	TREE GRATE - TYPE B

EXISTING ITEMS TO BE REMOVED AND STACKED (R&S)
- METAL TRASH RECEPTACLES
- BIG BELLY TRASH & RECYCLING UNITS
- WOOD PLANTERS (½ WHISKEY BARRELS)
- BIKE RACKS

GENERAL NOTES:

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2. SEE MODULAR SOIL CELL ENLARGEMENTS FOR LAYOUT OF MODULAR CELLS.
3. SEE PLANTING PLANS FOR LAYOUT OF STRUCTURAL SOIL.
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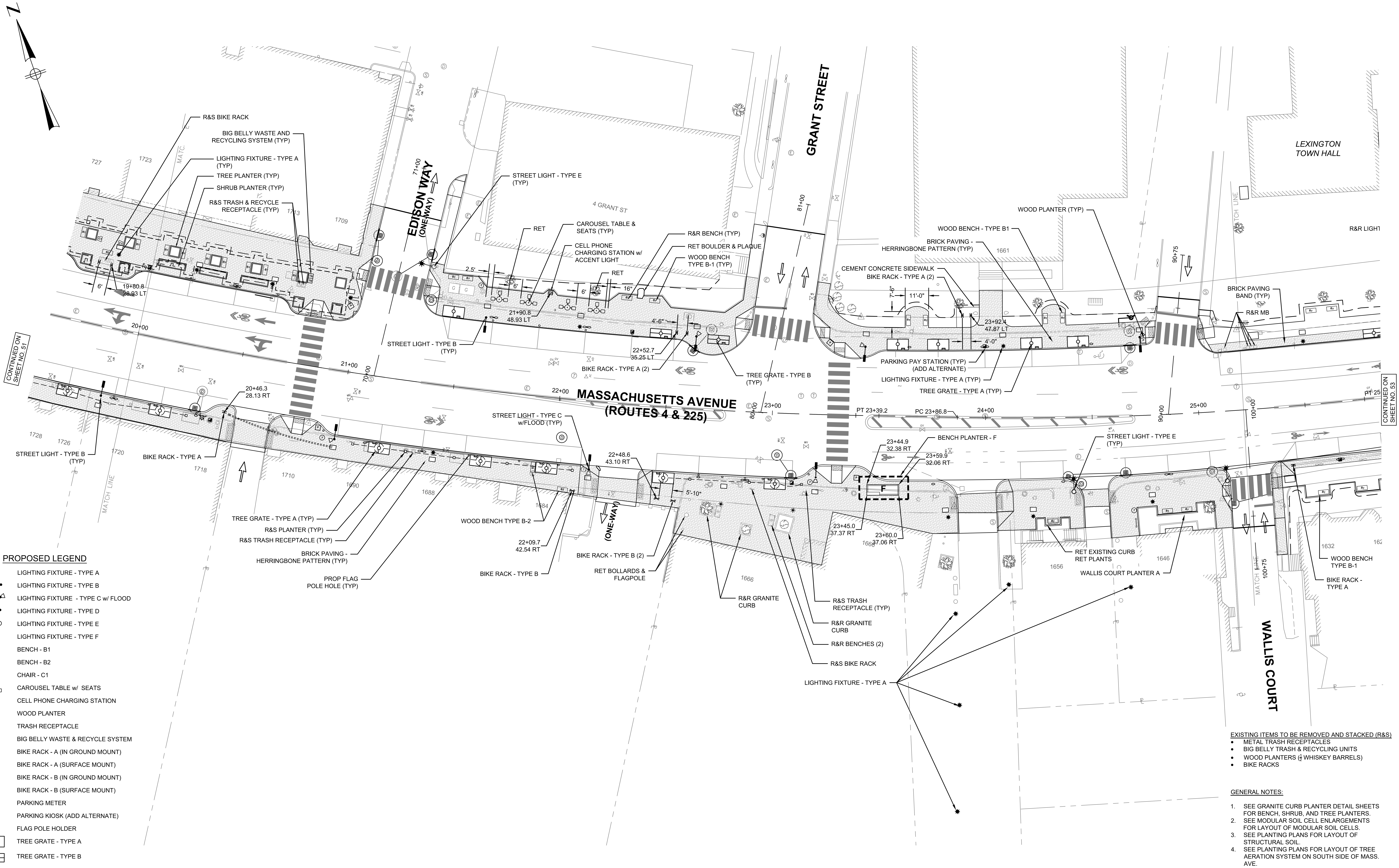

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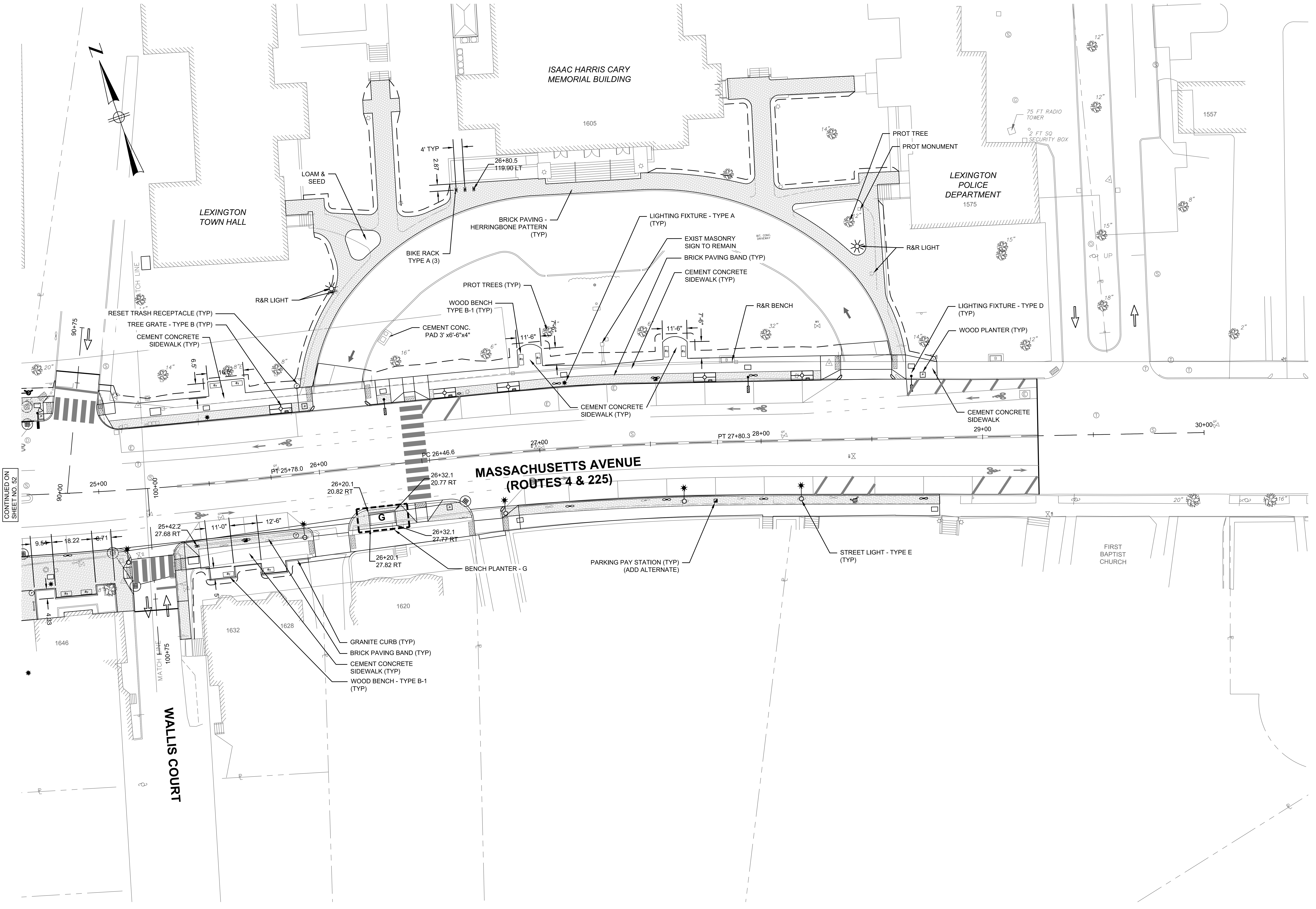

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- LIGHTING FIXTURE - TYPE C w/ FLOOD
- LIGHTING FIXTURE - TYPE D
- LIGHTING FIXTURE - TYPE E
- LIGHTING FIXTURE - TYPE F
- BENCH - B1
- BENCH - B2
- CHAIR - C1
- CAROUSEL TABLE w/ SEATS
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- BIKE RACK - B (SURFACE MOUNT)
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- PARKING KIOSK (ADD ALTERNATE)
- FLAG POLE HOLDER
- TREE GRATE - TYPE A
- TREE GRATE - TYPE B

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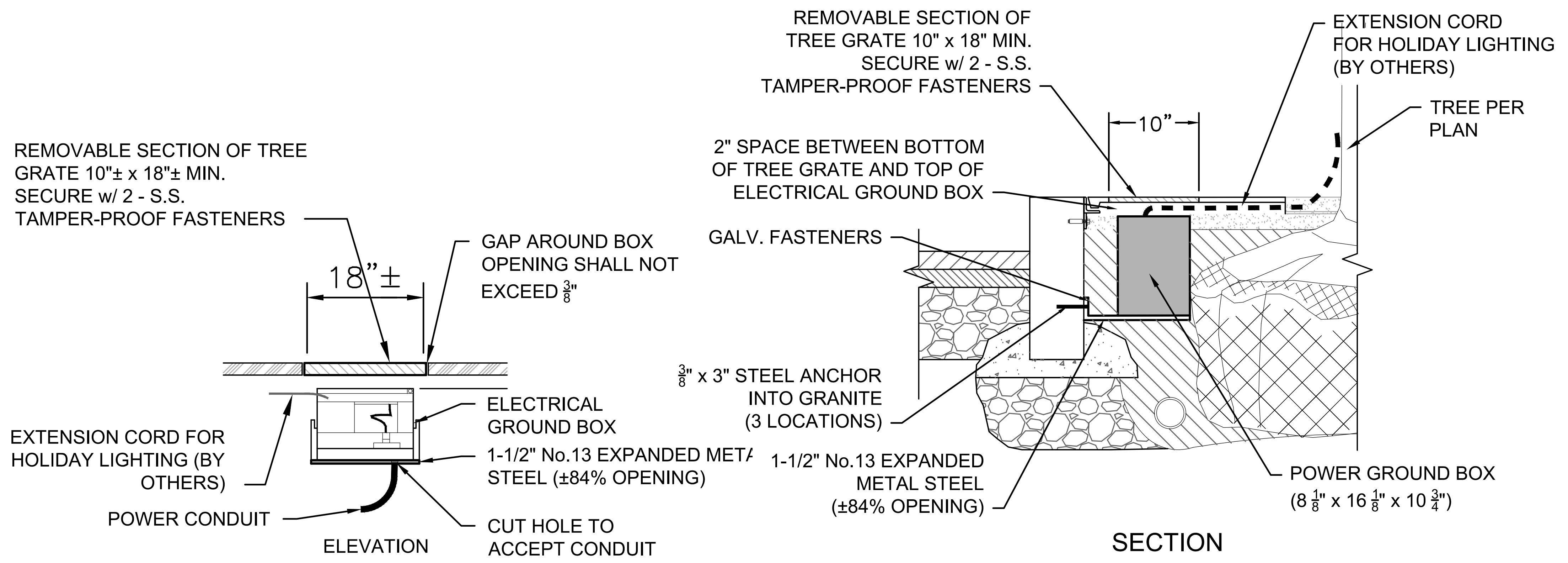
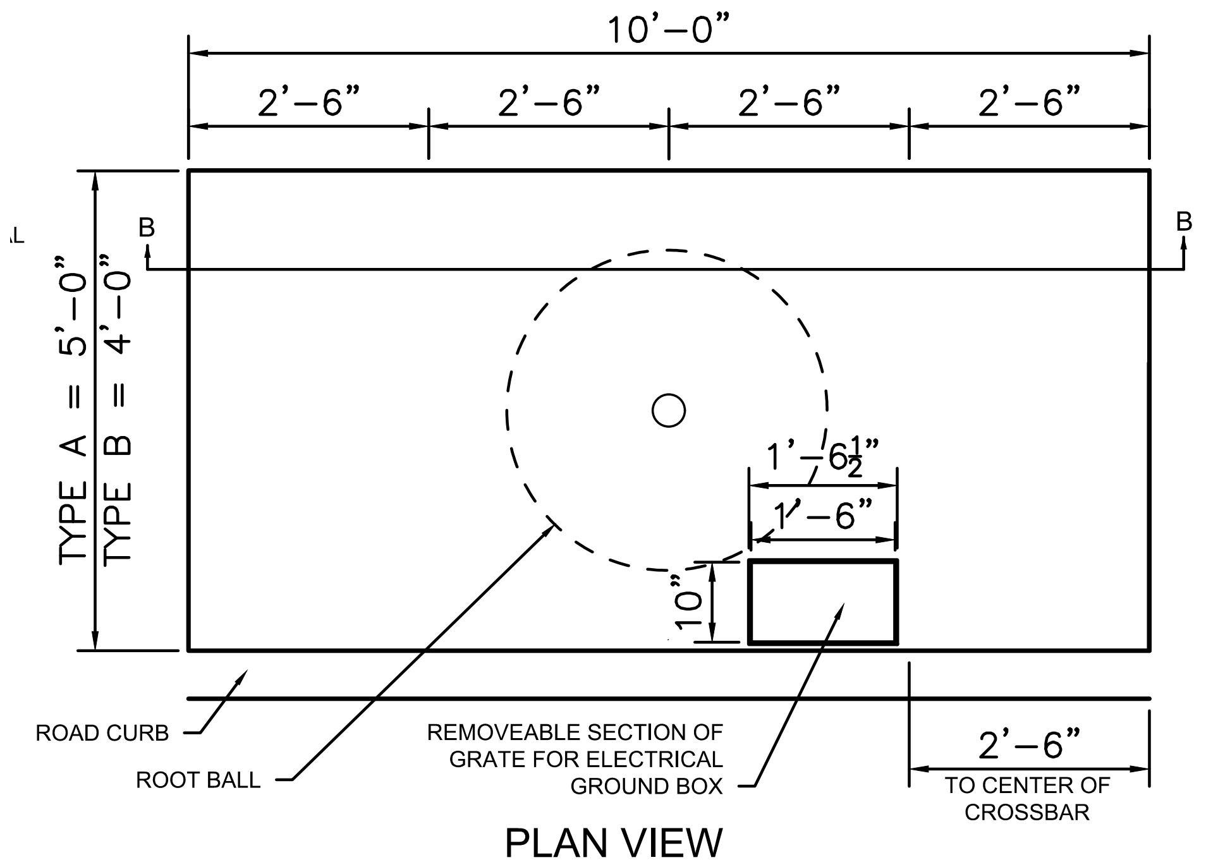
2/8/2021 12:15 PM O:\6300S\6331 - LEXINGTON CENTER STREETSCAPE\DRAWING FILES\PLANSET\6331 SITE IMPROVEMENTS PLAN.DWG (BETA STB BW.STB)


REMOVABLE SECTION OF TREE GRATE 10"± x 18"± MIN. SECURE w/ 2 - S.S. TAMPER-PROOF FASTENERS
18"±
GAP AROUND BOX OPENING SHALL NOT EXCEED $\frac{3}{8}$"
EXTENSION CORD FOR HOLIDAY LIGHTING (BY OTHERS)
ELECTRICAL GROUND BOX
1-1/2" No.13 EXPANDED METAL STEEL (±84% OPENING)
POWER CONDUIT
CUT HOLE TO ACCEPT CONDUIT
ELEVATION
REMOVABLE SECTION OF TREE GRATE 10" x 18" MIN. SECURE w/ 2 - S.S. TAMPER-PROOF FASTENERS
10"
EXTENSION CORD FOR HOLIDAY LIGHTING (BY OTHERS)
TREE PER PLAN
2" SPACE BETWEEN BOTTOM OF TREE GRATE AND TOP OF ELECTRICAL GROUND BOX
GALV. FASTENERS
$\frac{3}{8}$" x 3" STEEL ANCHOR INTO GRANITE (3 LOCATIONS)
1-1/2" No.13 EXPANDED METAL STEEL (±84% OPENING)
POWER GROUND BOX ($8\frac{1}{8}$" x $16\frac{3}{8}$" x $10\frac{3}{4}$")
SECTION

OUTDOOR POWER GROUND BOX FOR HOLIDAY LIGHTING

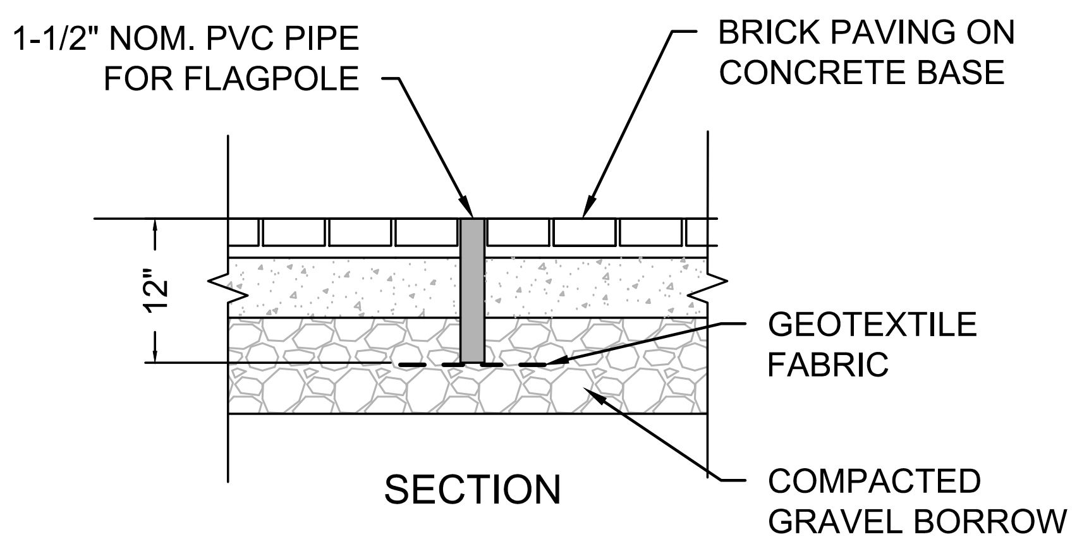
NOT TO SCALE



PLAN VIEW

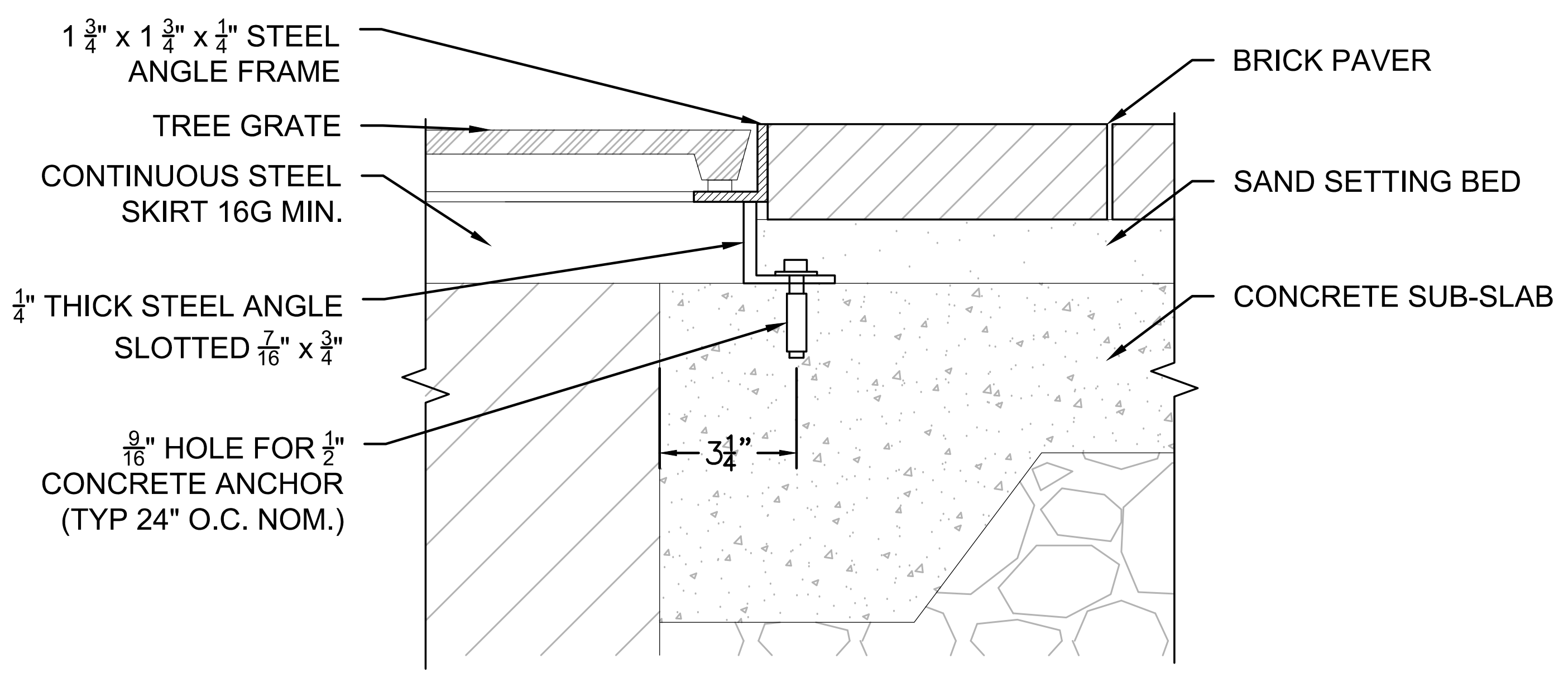
METAL TREE GRATES w/ OUTDOOR POWER GROUND BOX

SCALE: $\frac{1}{2}$" = 1'-0"


1-1/2" NOM. PVC PIPE FOR FLAGPOLE
BRICK PAVING ON CONCRETE BASE
12"
GEOTEXTILE FABRIC
COMPACTED GRAVEL BORROW
SECTION

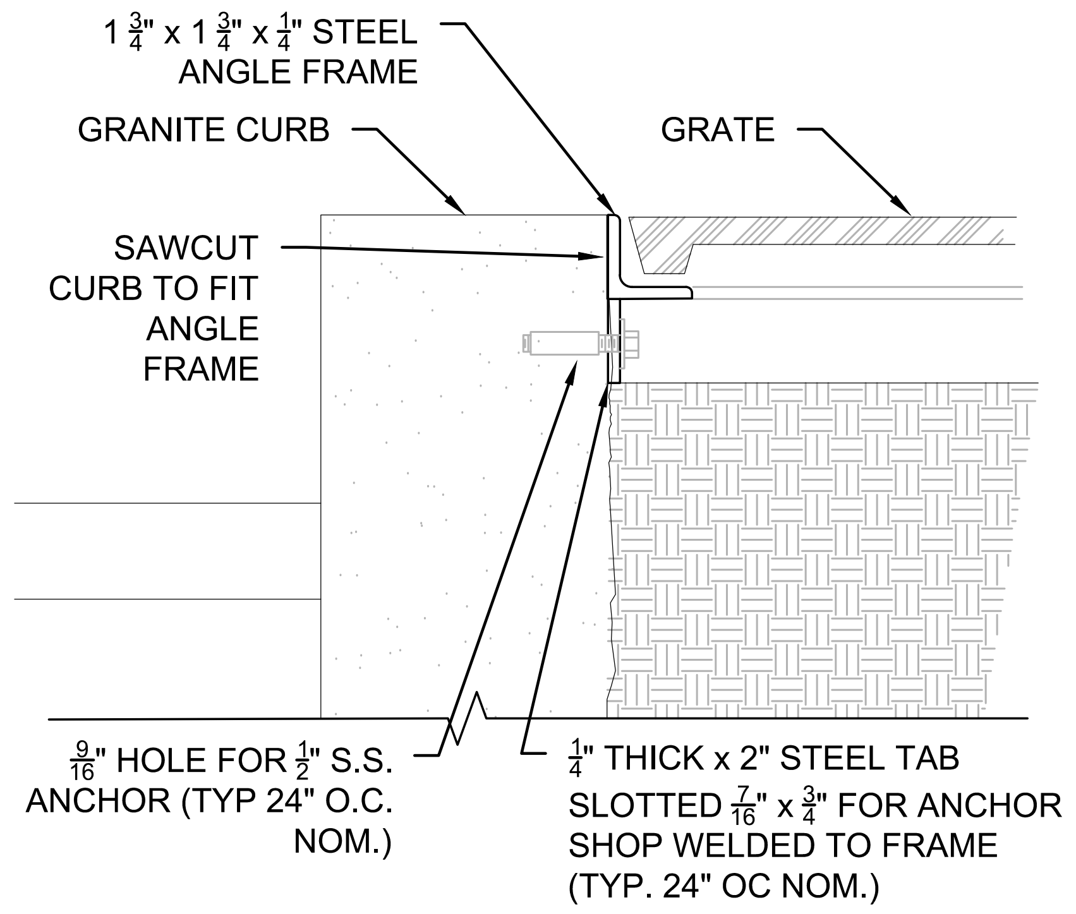
FLAGPOLE HOLDER IN BRICK SIDEWALK

NOT TO SCALE


$1\frac{3}{4}$" x $1\frac{3}{4}$" x $\frac{1}{4}$" STEEL ANGLE FRAME
TREE GRATE
CONTINUOUS STEEL SKIRT 16G MIN.
$\frac{1}{4}$" THICK STEEL ANGLE SLOTTED $\frac{7}{16}$" x $\frac{3}{4}$"
$\frac{9}{16}$" HOLE FOR $\frac{1}{2}$" CONCRETE ANCHOR (TYP 24" O.C. NOM.)
$3\frac{1}{4}$"
BRICK PAVER
SAND SETTING BED
CONCRETE SUB-SLAB

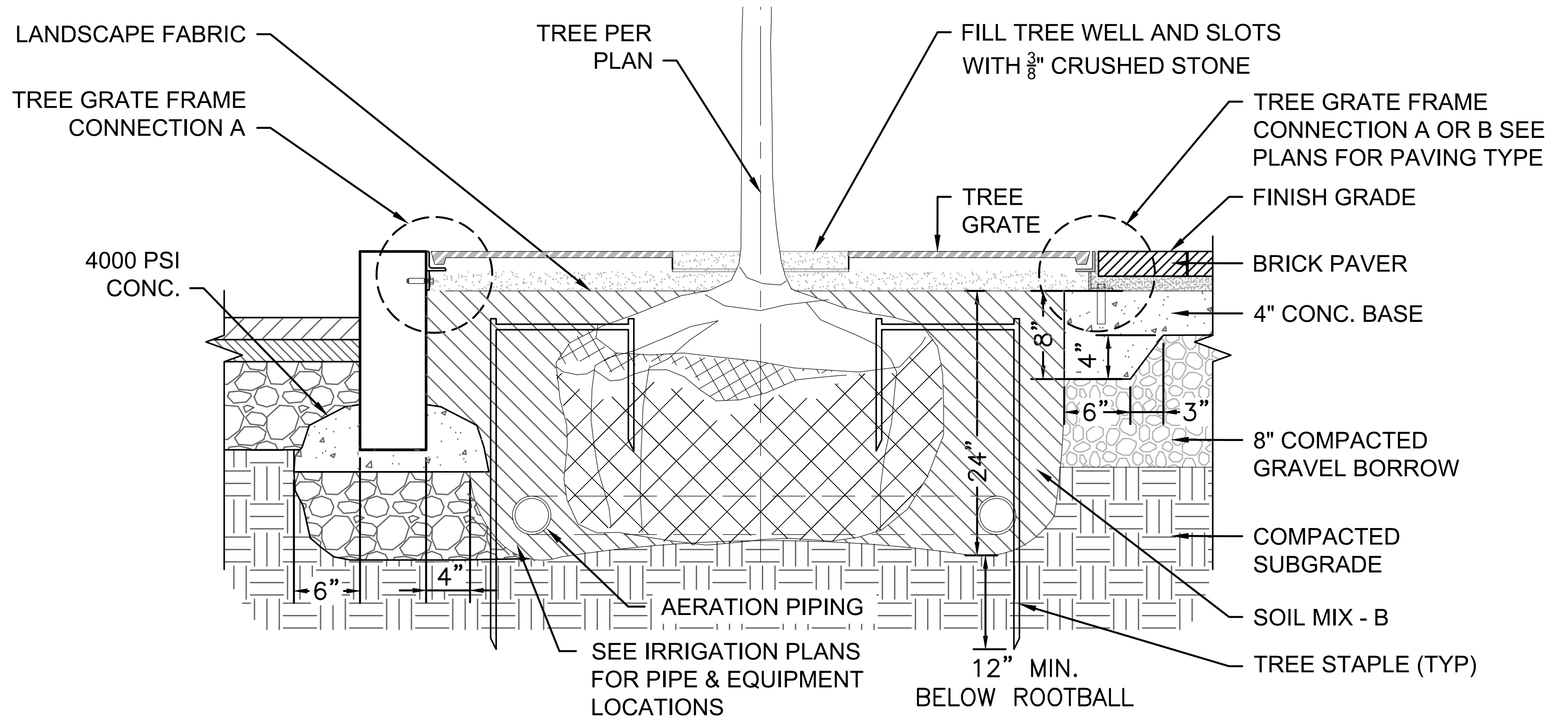
GRATE FRAME CONNECTION DETAIL B

SCALE: 3"=1'-0"


$1\frac{3}{4}$" x $1\frac{3}{4}$" x $\frac{1}{4}$" STEEL ANGLE FRAME
GRANITE CURB
GRATE
SAWCUT CURB TO FIT ANGLE FRAME
$\frac{9}{16}$" HOLE FOR $\frac{1}{2}$" S.S. ANCHOR (TYP 24" O.C. NOM.)
$\frac{1}{4}$" THICK x 2" STEEL TAB SLOTTED $\frac{7}{16}$" x $\frac{3}{4}$" FOR ANCHOR SHOP WELDED TO FRAME (TYP. 24" OC NOM.)

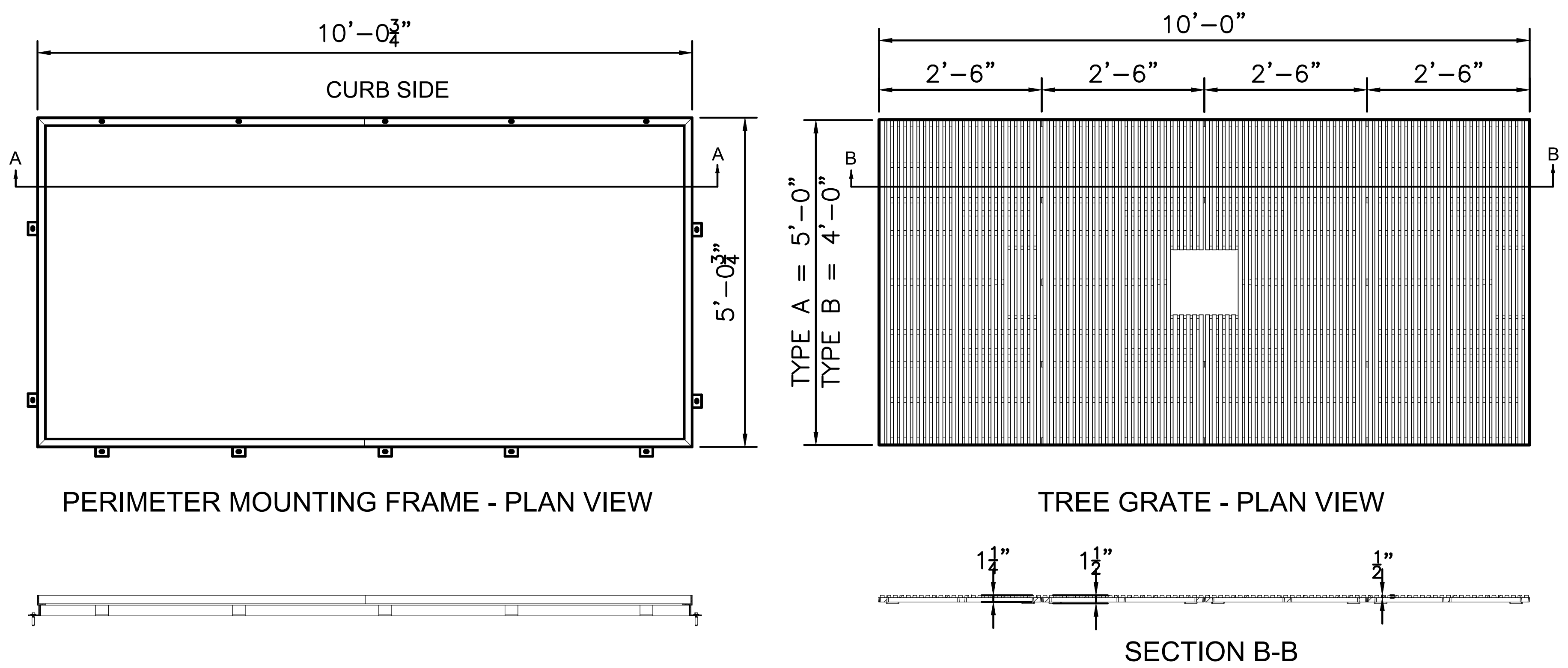
GRATE FRAME CONNECTION DETAIL A

SCALE: 3"=1'-0"


LANDSCAPE FABRIC
TREE PER PLAN
FILL TREE WELL AND SLOTS WITH $\frac{3}{8}$" CRUSHED STONE
TREE GRATE FRAME CONNECTION A
TREE GRATE FRAME CONNECTION A OR B SEE PLANS FOR PAVING TYPE
TREE GRATE
FINISH GRADE
4000 PSI CONC.
BRICK PAVER
4" CONC. BASE
8"
4"
6"
3"
8" COMPACTED GRAVEL BORROW
24"
COMPACTED SUBGRADE
6"
4"
AERATION PIPING
SOIL MIX - B
SEE IRRIGATION PLANS FOR PIPE & EQUIPMENT LOCATIONS
12" MIN. BELOW ROOTBALL
TREE STAPLE (TYP)

TREE GRATE SECTION

SCALE: 1"=1'-0"



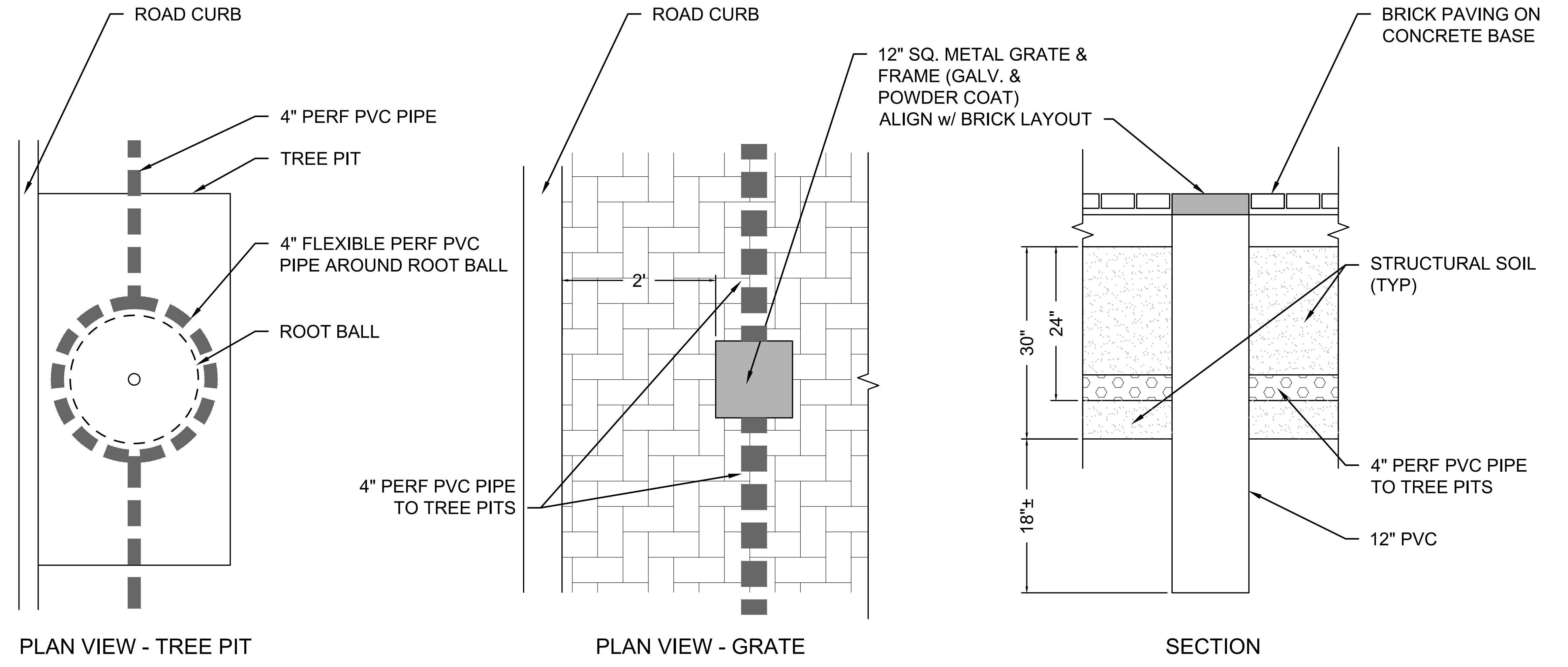
PERIMETER MOUNTING FRAME - PLAN VIEW

TREE GRATE - PLAN VIEW

SECTION B-B

METAL TREE GRATES - TYPE A & B (ADA COMPLIANT)

SCALE: $\frac{1}{2}$" = 1'-0"


ROAD CURB
4" PERF PVC PIPE
TREE PIT
4" FLEXIBLE PERF PVC PIPE AROUND ROOT BALL
ROOT BALL
4" PERF PVC PIPE TO TREE PITS
ROAD CURB
12" SQ. METAL GRATE & FRAME (GALV. & POWDER COAT) ALIGN w/ BRICK LAYOUT
2'
BRICK PAVING ON CONCRETE BASE
STRUCTURAL SOIL (TYP)
30"
24"
18"±
4" PERF PVC PIPE TO TREE PITS
12" PVC

PLAN VIEW - TREE PIT

PLAN VIEW - GRATE

SECTION

TREE AERATION SYSTEM SOUTH SIDE OF MASS. AVE.

NOT TO SCALE

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REGISTERED PROFESSIONAL
KIEN Y. HO CIVIL ENGINEER No. 46731
Kien Y Ho
2/8/21

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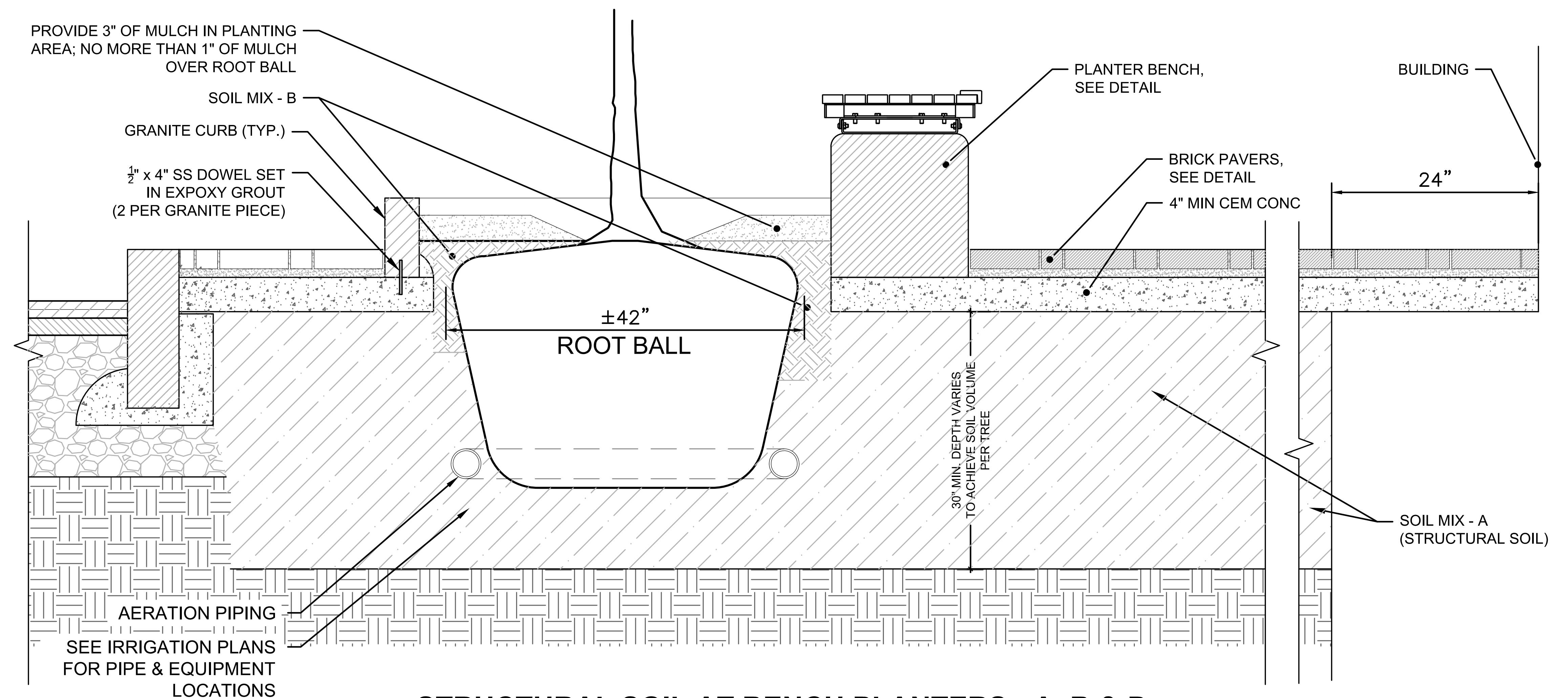
TITLE
TOWN CENTER IMPROVEMENTS
TREE GRATE DETAILS
LEXINGTON, MASSACHUSETTS

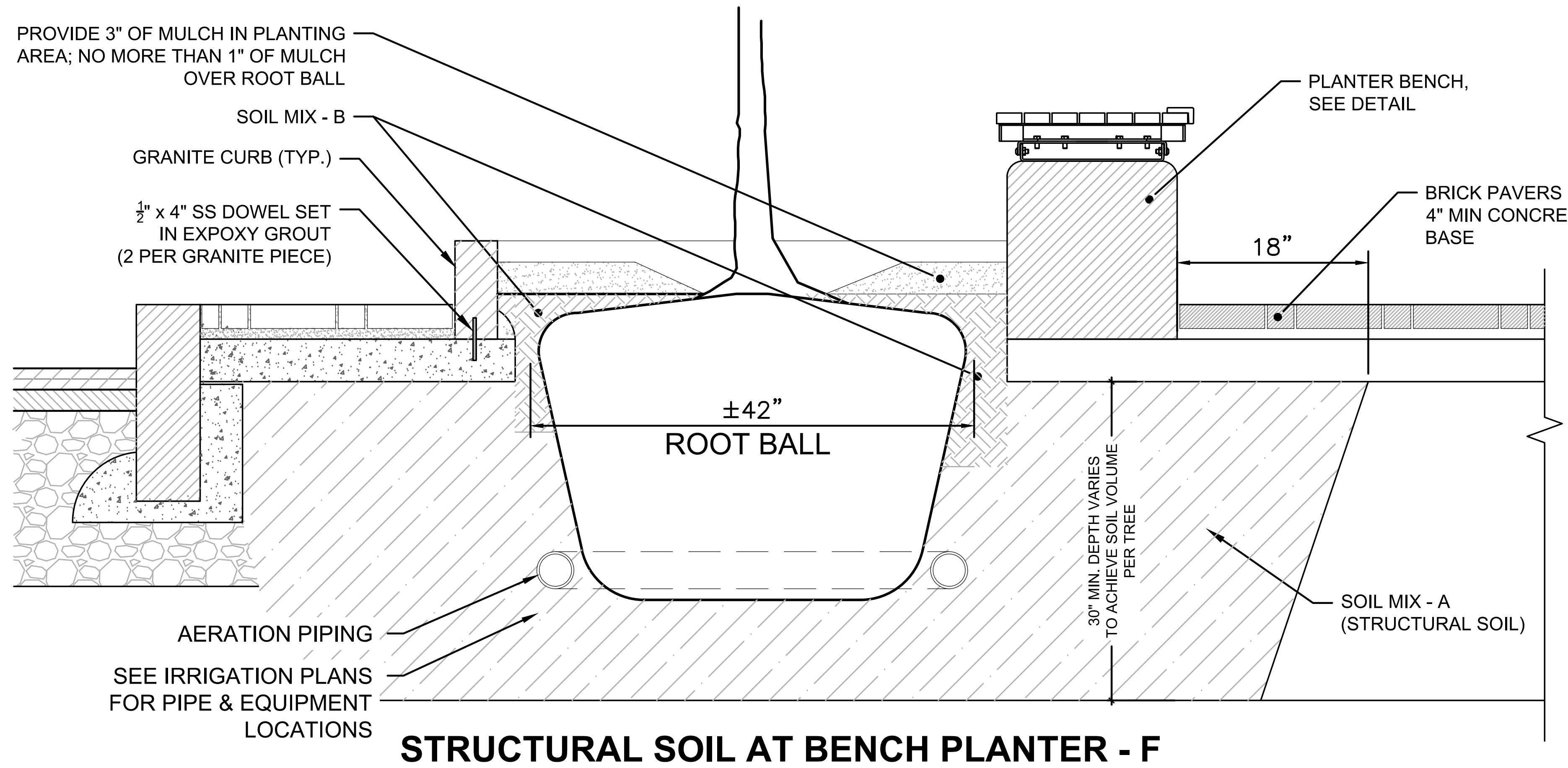
BETA JOB NO. 6331
ISSUE DATE 02/05/2021
SHEET NO. 54 OF 92

2/8/2021 12:18 PM O:\6300S\6331 - LEXINGTON CENTER STREETSCAPE\DRAWING FILES\PLANSET\6331 SITE DETAILS.DWG (BETA STB BW.STB)


PROVIDE 3" OF MULCH IN PLANTING AREA; NO MORE THAN 1" OF MULCH OVER ROOT BALL
SOIL MIX - B
GRANITE CURB (TYP.)
½" x 4" SS DOWEL SET IN EXPOXY GROUT (2 PER GRANITE PIECE)
PLANTER BENCH, SEE DETAIL
BRICK PAVERS, SEE DETAIL
4" MIN CEM CONC
BUILDING
24"
±42"
ROOT BALL
30" MIN. DEPTH VARIES TO ACHIEVE SOIL VOLUME PER TREE
SOIL MIX - A (STRUCTURAL SOIL)
AERATION PIPING
SEE IRRIGATION PLANS FOR PIPE & EQUIPMENT LOCATIONS

STRUCTURAL SOIL AT BENCH PLANTERS - A, B & D

SCALE: 1"=1'-0"

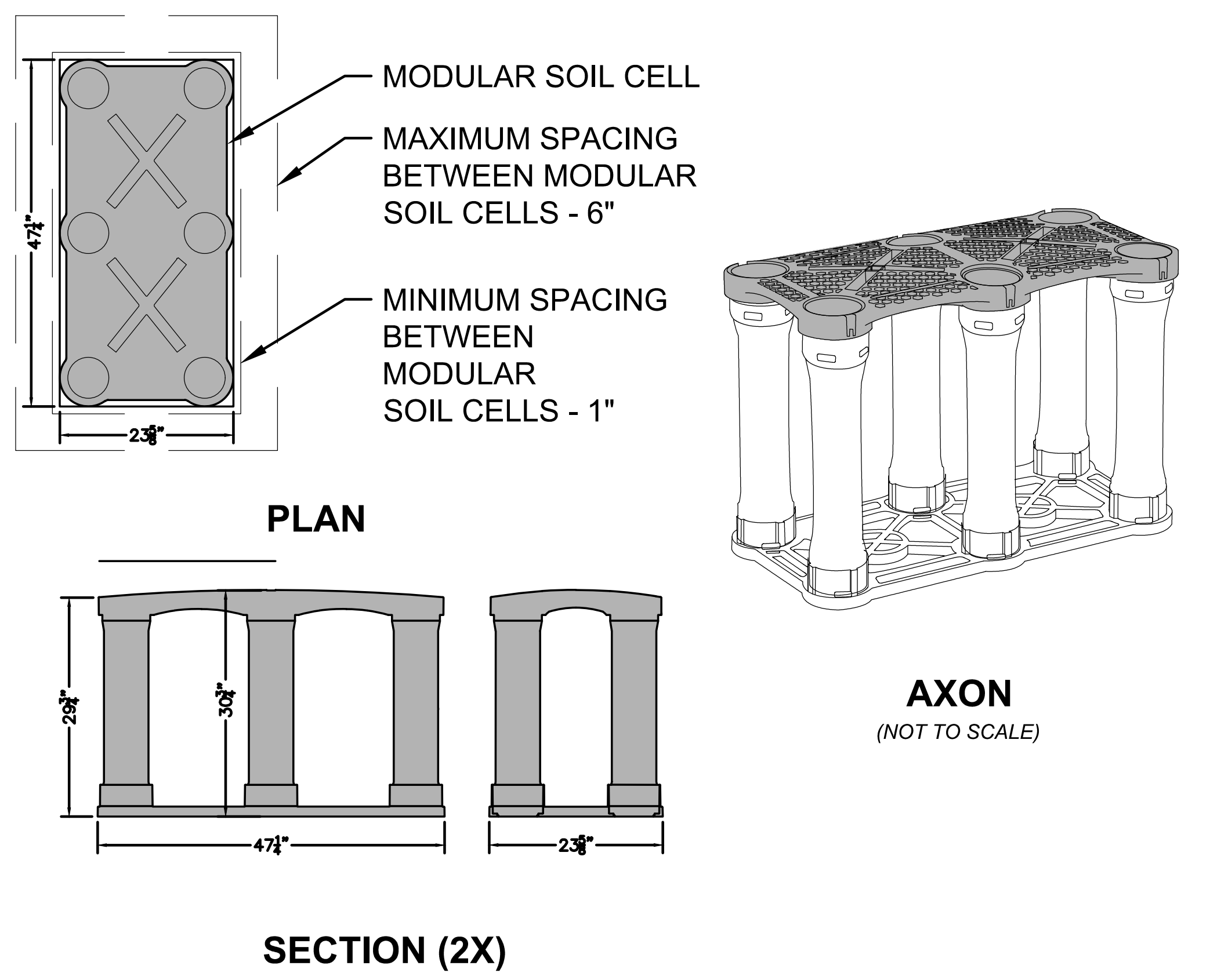

PROVIDE 3" OF MULCH IN PLANTING AREA; NO MORE THAN 1" OF MULCH OVER ROOT BALL
SOIL MIX - B
GRANITE CURB (TYP.)
½" x 4" SS DOWEL SET IN EXPOXY GROUT (2 PER GRANITE PIECE)
PLANTER BENCH, SEE DETAIL
BRICK PAVERS ON 4" MIN CONCRETE BASE
18"
±42"
ROOT BALL
30" MIN. DEPTH VARIES TO ACHIEVE SOIL VOLUME PER TREE
SOIL MIX - A (STRUCTURAL SOIL)
AERATION PIPING
SEE IRRIGATION PLANS FOR PIPE & EQUIPMENT LOCATIONS

STRUCTURAL SOIL AT BENCH PLANTER - F

SCALE: 1"=1'-0"

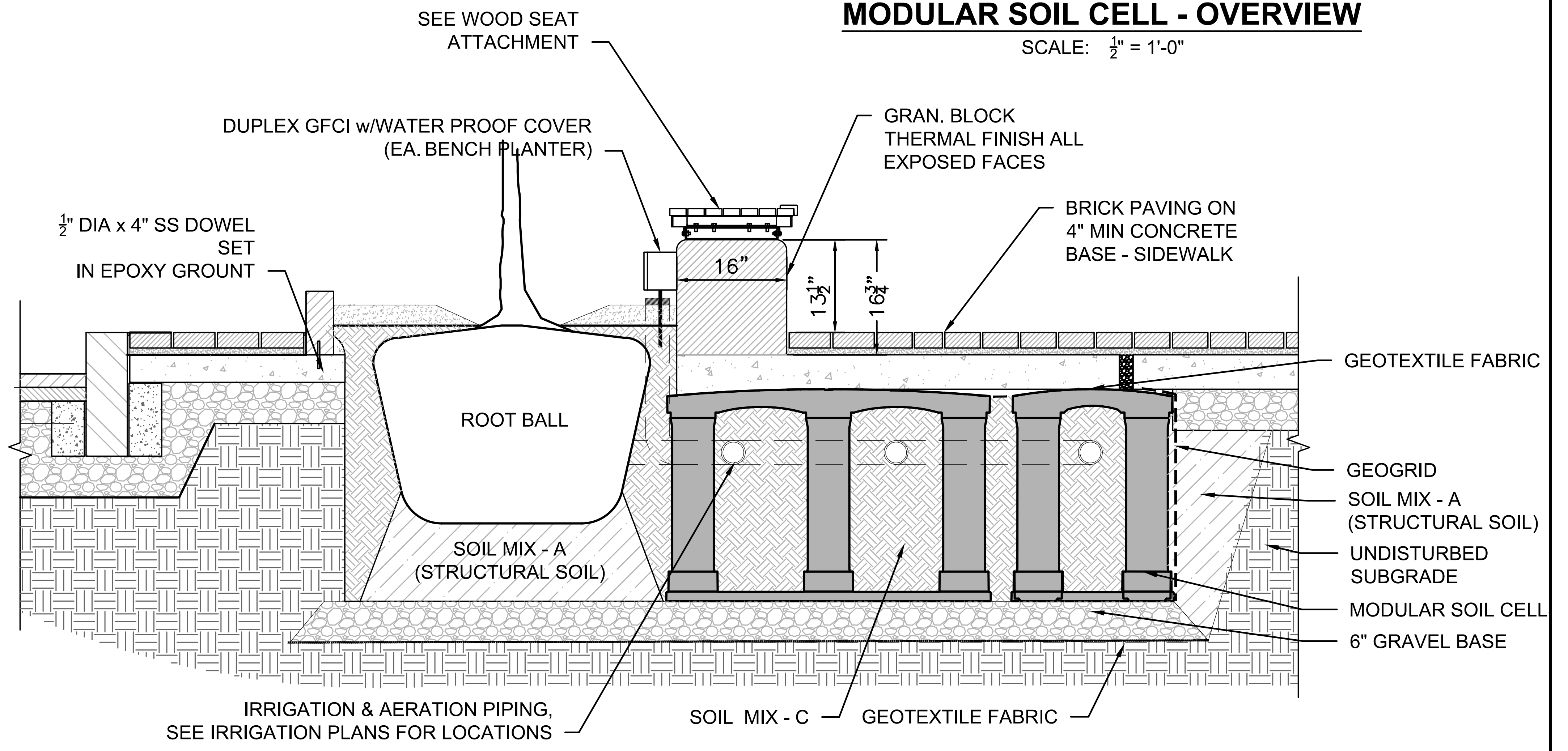
NOTES:

1. SEE GRAN. CURBED PLANTER DETAILS FOR TREATMENT OF PLANTER BENCHES C,E & G.
2. SEE IRRIGATION PLANS FOR IRRIGATION LINE LOCATIONS.
3. SEE LIGHTING/ELECTRICAL PLAN FOR LOCATION OF STREET LIGHT ELECTRICAL LINES.
4. SEE UTILITY PLANS FOR LOCATIONS OF GAS & ELECTRIC LINES.


MODULAR SOIL CELL
MAXIMUM SPACING BETWEEN MODULAR SOIL CELLS - 6"
MINIMUM SPACING BETWEEN MODULAR SOIL CELLS - 1"
47¼"
23⅝"
PLAN
29¾"
30¾"
47¼"
23⅝"
SECTION (2X)
AXON
(NOT TO SCALE)

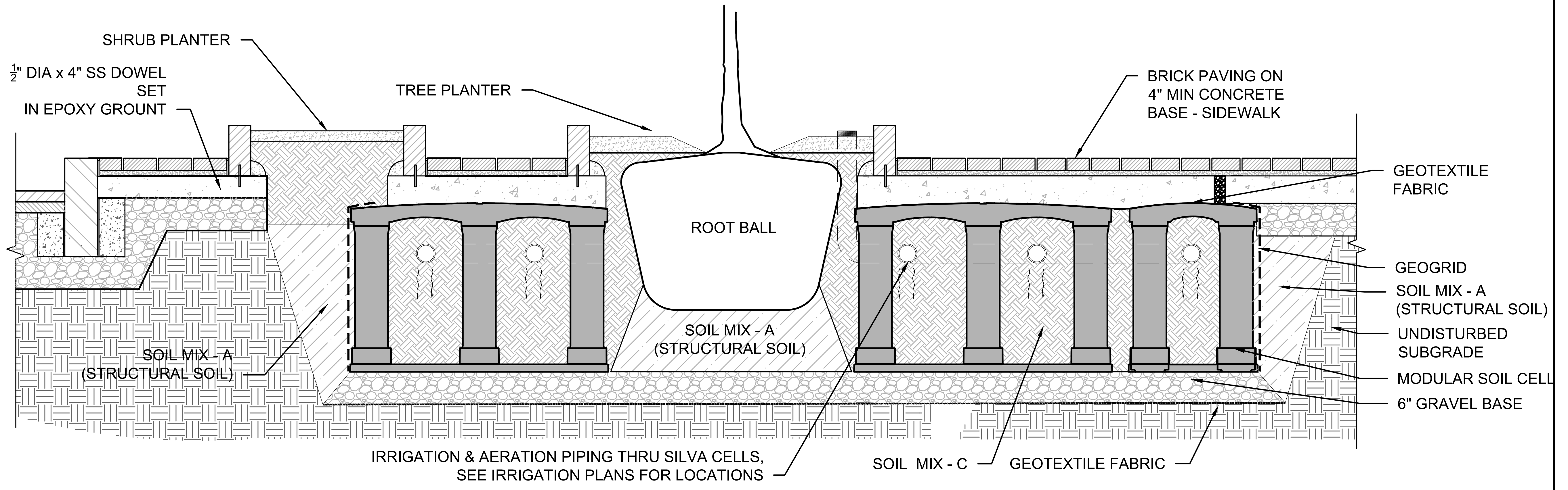
MODULAR SOIL CELL - OVERVIEW

SCALE: ½" = 1'-0"


SEE WOOD SEAT ATTACHMENT
DUPLEX GFCI w/WATER PROOF COVER (EA. BENCH PLANTER)
GRAN. BLOCK THERMAL FINISH ALL EXPOSED FACES
½" DIA x 4" SS DOWEL SET IN EPOXY GROUNT
BRICK PAVING ON 4" MIN CONCRETE BASE - SIDEWALK
16"
13½"
16¾"
ROOT BALL
SOIL MIX - A (STRUCTURAL SOIL)
GEOTEXTILE FABRIC
GEOGRID
SOIL MIX - A (STRUCTURAL SOIL)
UNDISTURBED SUBGRADE
MODULAR SOIL CELL
6" GRAVEL BASE
IRRIGATION & AERATION PIPING, SEE IRRIGATION PLANS FOR LOCATIONS
SOIL MIX - C
GEOTEXTILE FABRIC

SILVA CELL DETAILS AT BENCH PLANTER - E ONLY

SCALE: ¾" = 1'-0"


SHRUB PLANTER
½" DIA x 4" SS DOWEL SET IN EPOXY GROUNT
TREE PLANTER
BRICK PAVING ON 4" MIN CONCRETE BASE - SIDEWALK
GEOTEXTILE FABRIC
ROOT BALL
SOIL MIX - A (STRUCTURAL SOIL)
SOIL MIX - A (STRUCTURAL SOIL)
GEOGRID
SOIL MIX - A (STRUCTURAL SOIL)
UNDISTURBED SUBGRADE
MODULAR SOIL CELL
6" GRAVEL BASE
IRRIGATION & AERATION PIPING THRU SILVA CELLS, SEE IRRIGATION PLANS FOR LOCATIONS
SOIL MIX - C
GEOTEXTILE FABRIC

SILVA CELL DETAILS - TYPICAL

SCALE: ¾" = 1'-0"

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TITLE
TOWN CENTER IMPROVEMENTS
MODULAR SOIL CELLS & STRUCTURAL SOIL DETAILS
LEXINGTON, MASSACHUSETTS

BETA JOB NO. 6331
ISSUE DATE 02/05/2021
SHEET NO. 55 OF 92

2/8/2021 12:20 PM O:\6300S\6331 - LEXINGTON CENTER STREETSCAPE\DRAWING FILES\PLANSET\6331 SITE DETAILS.DWG (BETA STB BW.STB)

TREE PLANTER (TYP)
LIMIT OF MODULAR SOIL CELLS (TYP)
APPROXIMATE LIMIT OF EXCAVATION (TYP)
AT ALL LOCATIONS WHERE POTENTIAL UTILITY CONFILICTS OCCUR CONTRACTOR SHALL SUBMIT A SKETCH SHOWING REVISED MODULAR SOIL CELL LAYOUT FOR APPROVAL (TYP)
LIGHTING FIXTURE - TYPE A (TYP)
11+67.7 45.06 LT
11+67.7 34.07 LT
13+05.8 45.05 LT
13+05.8 34.06 LT
1845
MATCH LINE ENLARGEMENT - B
N
MASSACHUSETTS AVENUE (ROUTES 4 & 225)
12+00
13+00
14+00
50+00
60+00

MODULAR SOIL CELL ENLARGEMENT - A

SCALE: 1" = 10'-0"

ENLARGEMENT - A MATCH LINE
DE
EXIST. CLOCK TOWER
15+50.7 46.40 LT
AT ALL LOCATIONS WHERE POTENTIAL UTILITY CONFILICTS OCCUR CONTRACTOR SHALL SUBMIT A SKETCH SHOWING REVISED MODULAR SOIL CELL LAYOUT FOR APPROVAL (TYP)
1781
1775
1777
SHRUB PLANTER (TYP)
TREE PLANTER (TYP)
LIMIT OF MODULAR SOIL CELLS (TYP)
APPROXIMATE LIMIT OF EXCAVATION (TYP)
16+88.9 48.37 LT
17+12.8 48.66 LT
1761
17+48.7 48.65 LT
17+56.0 46.90 LT
MATCH LINE ENLARGEMENT - C
CONTINUED ON SHEET NO. 57
C
LIGHTING FIXTURE - TYPE A (TYP)
15+45.7 27.34 LT
16+86.1 27.34 LT
MASSACHUSETTS AVENUE (ROUTES 4 & 225)
17+15.1 27.51 LT
17+49.5 31.71 LT
17+55.9 36.04 LT
15+00
16+00
17+00
52+00
WV
GV

MODULAR SOIL CELL ENLARGEMENT - B

SCALE: 1" = 10'-0"

NOTES:

1. SEE GRANITE CURB PLANTER DETAIL SHEETS FOR BENCH, SHRUB, AND TREE PLANTERS.
2. SEE MODULAR SOIL CELL ENLARGEMENTS FOR LAYOUT OF MODULAR SOIL CELLS.
3. SEE PLANTING PLANS FOR LAYOUT OF STRUCTURAL SOIL AND TREE AERATION.

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No. 46731
2/8/21

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SCALE
20 0 20 40
SCALE IN FEET: 1"=20'
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TITLE
TOWN CENTER IMPROVEMENTS
MODUAL SOIL CELL ENLARGEMENTS
LEXINGTON, MASSACHUSETTS

BETA JOB NO. 6331
ISSUE DATE 02/05/2021
SHEET NO. 56 OF 92

2/8/2021 12:20 PM O:\6300S\6331 - LEXINGTON CENTER STREETSCAPE\DRAWING FILES\PLANSET\6331 SILVA CELL ENLARGEMENT PLAN.DWG (BETA STB BW.STB)

MODULAR SOIL CELL ENLARGEMENT - C

SCALE: 1" = 10'-0"

NOTES:

1. SEE GRANITE CURB PLANTER DETAIL SHEETS FOR BENCH, SHRUB, AND TREE PLANTERS.
2. SEE MODULAR SOIL CELL ENLARGEMENTS FOR LAYOUT OF MODULAR SOIL CELLS.
3. SEE PLANTING PLANS FOR LAYOUT OF STRUCTURAL SOIL AND TREE AERATION.

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TITLE

TOWN CENTER IMPROVEMENTS
MODULAR SOIL CELL ENLARGEMENTS
LEXINGTON, MASSACHUSETTS

BETA JOB NO. 6331
ISSUE DATE 02/05/2021
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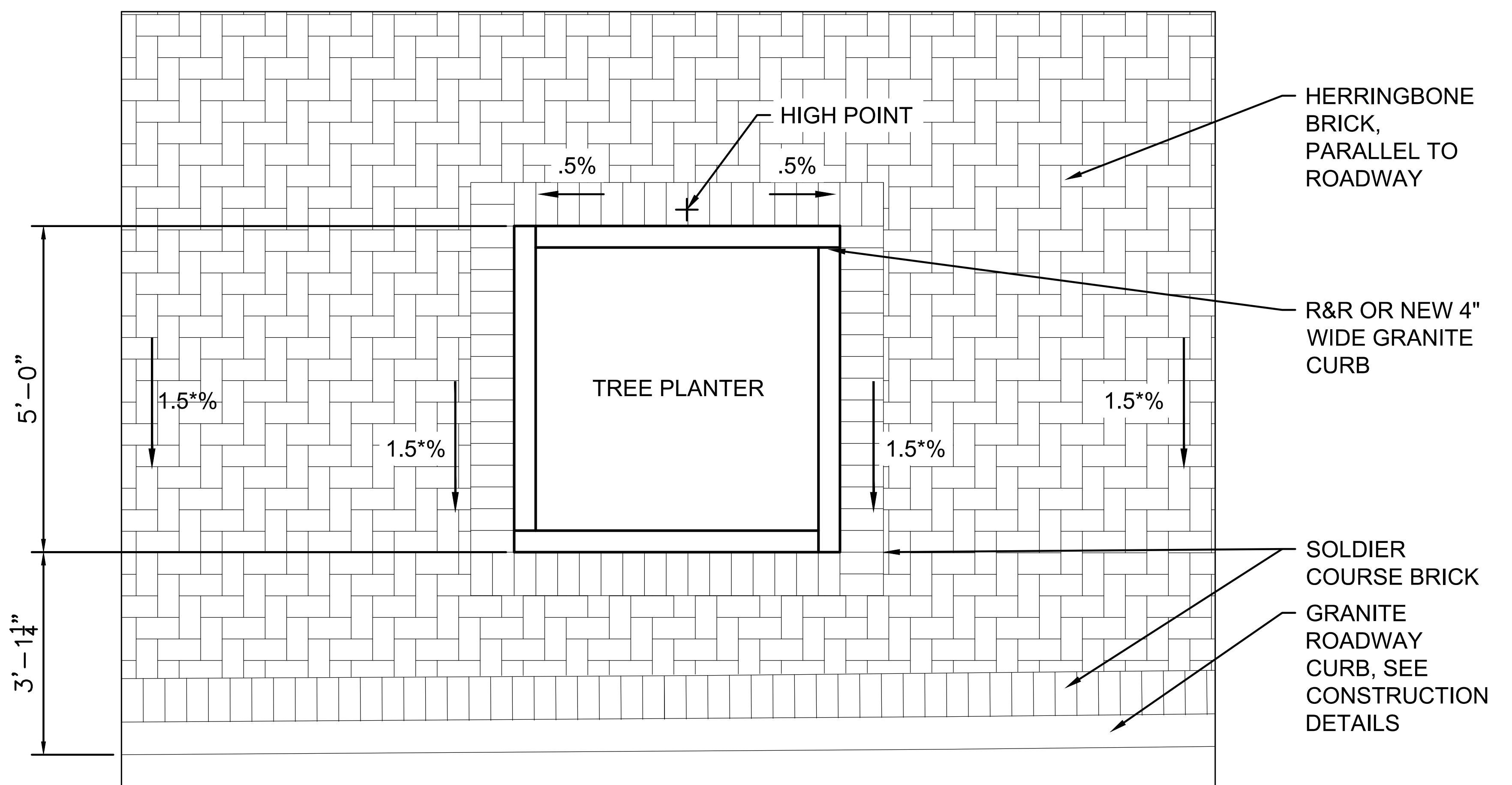
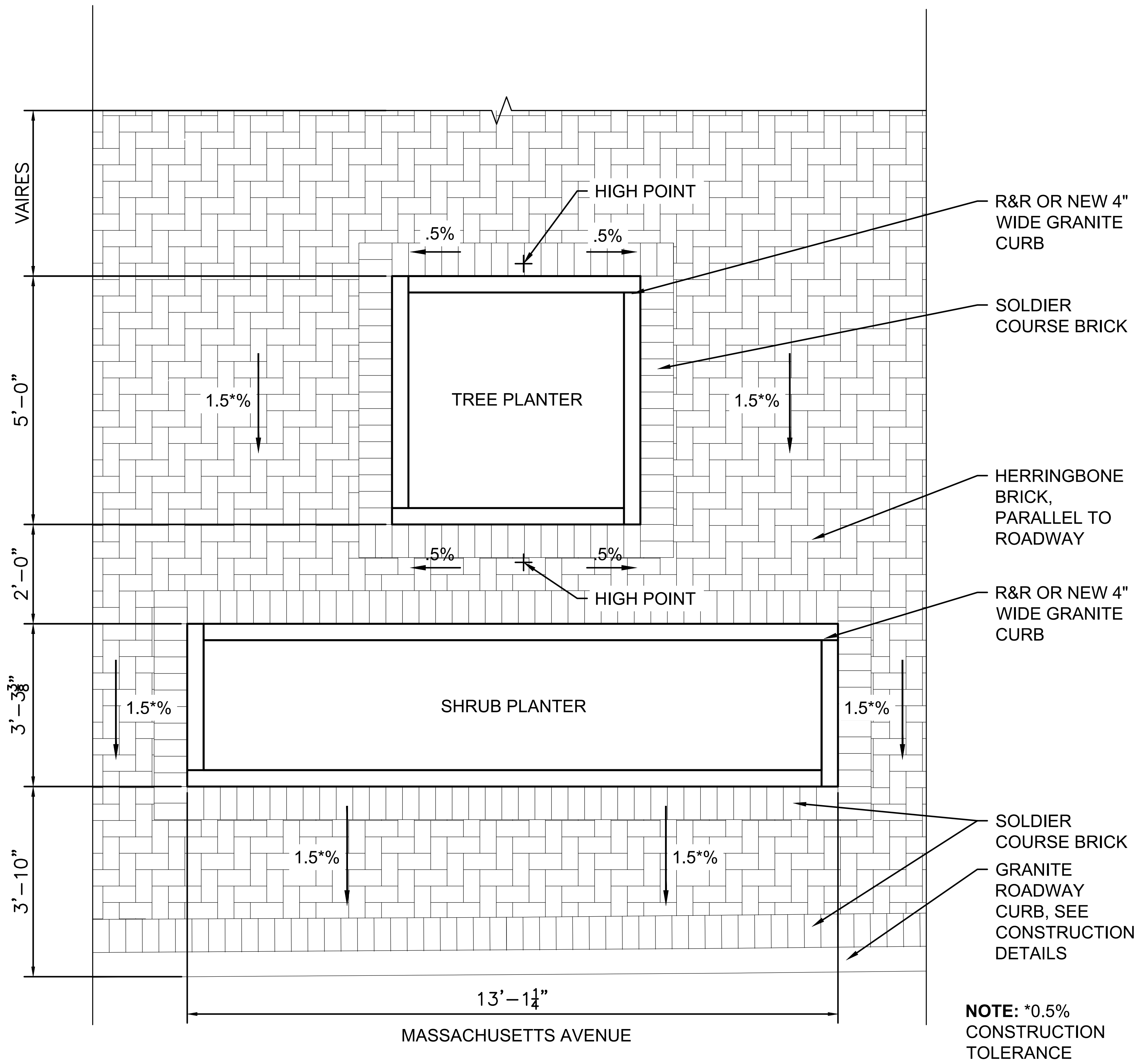
2/8/2021 12:20 PM O:\6300S\6331 - LEXINGTON CENTER STREETSCAPE\DRAWING FILES\PLANSET\6331 SILVA CELL ENLARGEMENT PLAN.DWG (BETA STB BW.STB)


HIGH POINT
.5%
.5%
HERRINGBONE BRICK, PARALLEL TO ROADWAY
R&R OR NEW 4" WIDE GRANITE CURB
TREE PLANTER
5'–0"
1.5*%
1.5*%
1.5*%
1.5*%
SOLDIER COURSE BRICK
GRANITE ROADWAY CURB, SEE CONSTRUCTION DETAILS
3'–1¼"
MASSACHUSETTS AVENUE

NOTE: *0.5% CONSTRUCTION TOLERANCE

BRICK PAVING AT TREE PLANTER
STA11+80-13+00 LT

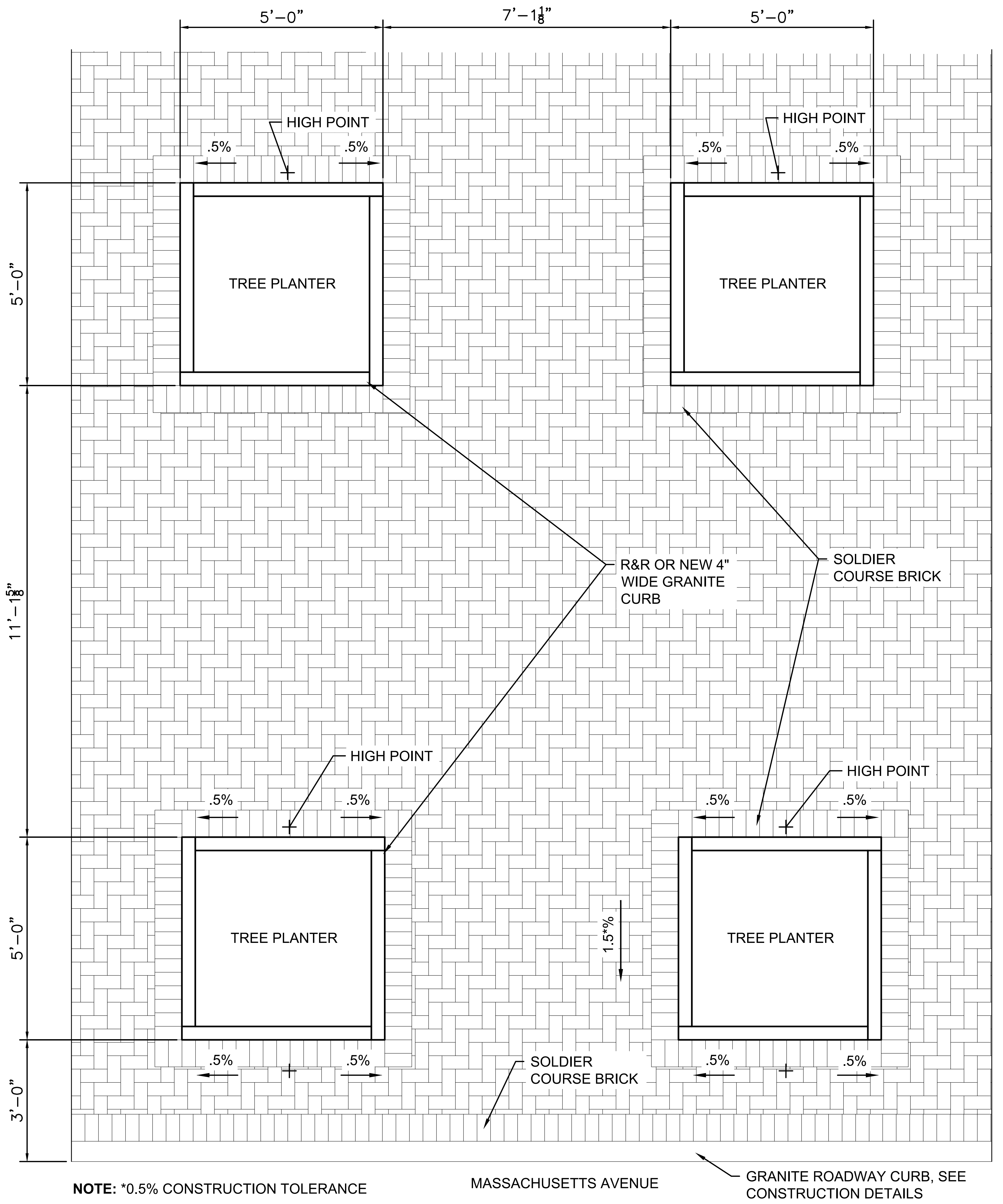
SCALE: ½" = 1'-0"



NOTE: *0.5% CONSTRUCTION TOLERANCE

BRICK PAVING AT TREE & SHRUB PLANTER

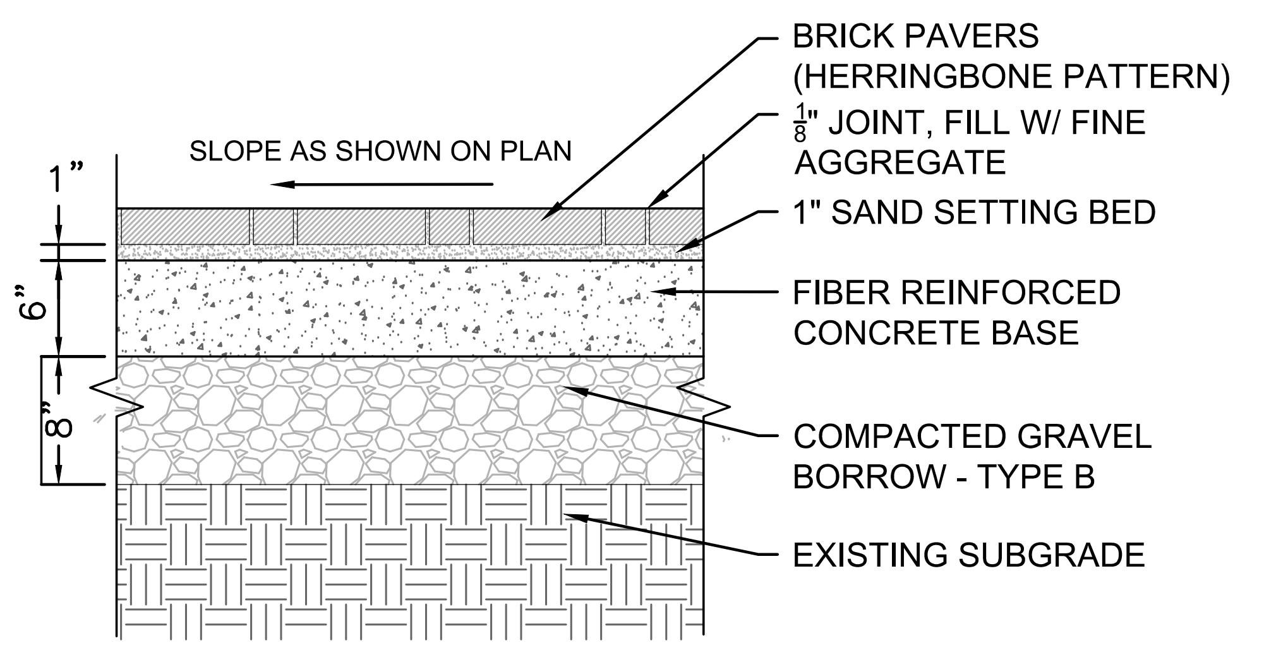
SCALE: ½" = 1'-0"



NOTE: *0.5% CONSTRUCTION TOLERANCE

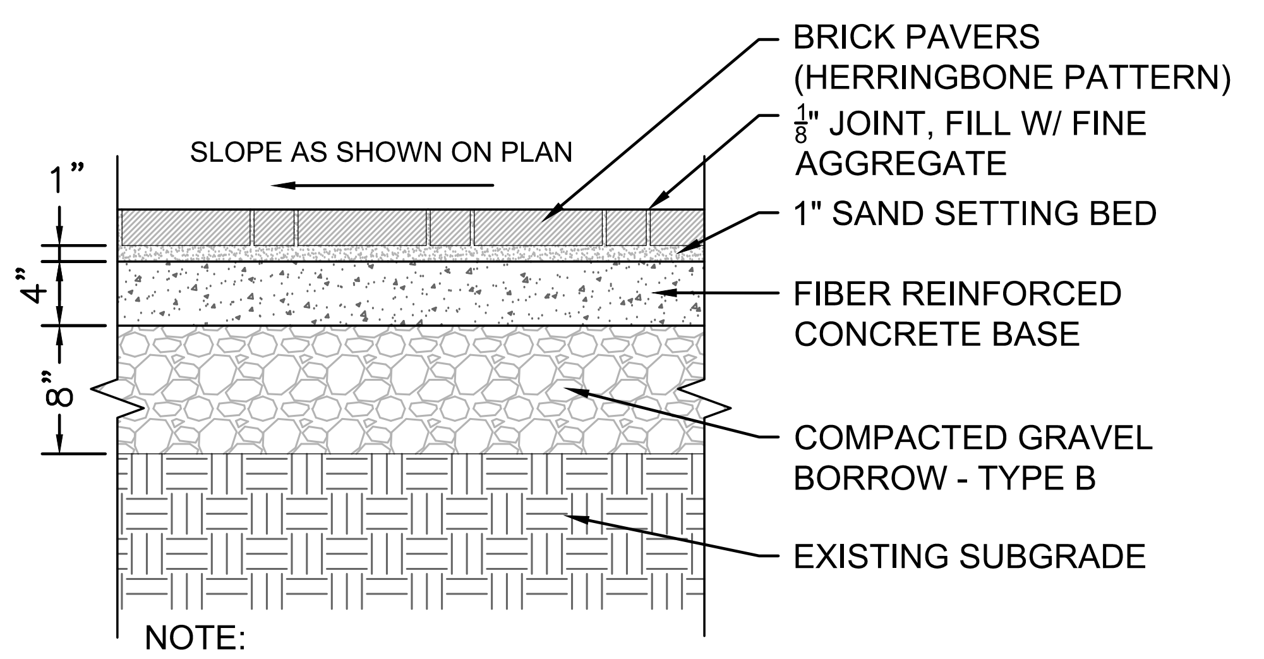
BRICK PAVING AT GROUP OF 4 TREE PLANTERS

SCALE: ½" = 1'-0"


SLOPE AS SHOWN ON PLAN
1"
6"
8"
BRICK PAVERS (HERRINGBONE PATTERN)
⅛" JOINT, FILL W/ FINE AGGREGATE
1" SAND SETTING BED
FIBER REINFORCED CONCRETE BASE
COMPACTED GRAVEL BORROW - TYPE B
EXISTING SUBGRADE

BRICK PAVING ON CONCRETE BASE - DRIVEWAY

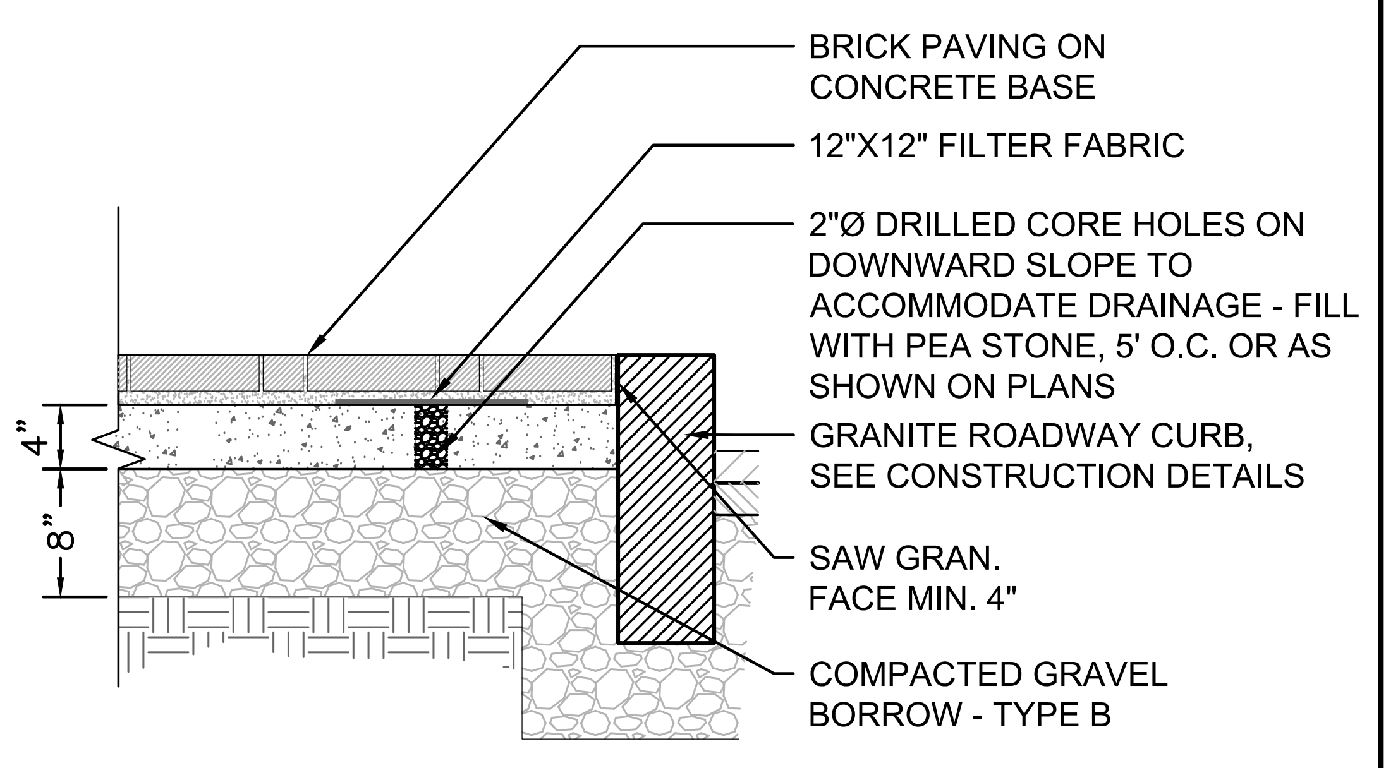
SCALE: 1"=1'-0"


SLOPE AS SHOWN ON PLAN
1"
4"
8"
BRICK PAVERS (HERRINGBONE PATTERN)
⅛" JOINT, FILL W/ FINE AGGREGATE
1" SAND SETTING BED
FIBER REINFORCED CONCRETE BASE
COMPACTED GRAVEL BORROW - TYPE B
EXISTING SUBGRADE

NOTE:
BRICK PAVING OVER SILVA CELLS & STRUCTURAL SOIL
DOES NOT HAVE A COMPACTED GRAVEL BASE.

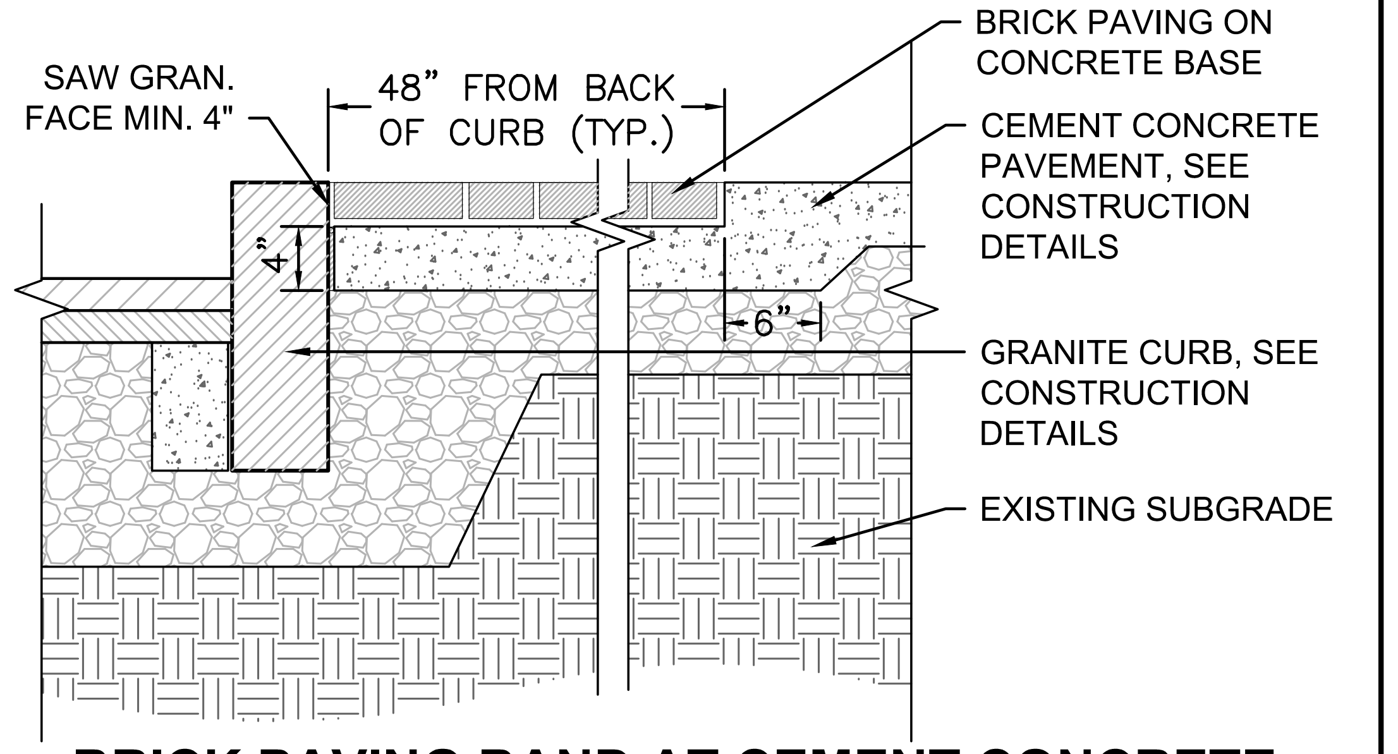
BRICK PAVING ON CONCRETE BASE - SIDEWALK

SCALE: 1"=1'-0"


BRICK PAVING ON CONCRETE BASE
12"X12" FILTER FABRIC
2"Ø DRILLED CORE HOLES ON DOWNWARD SLOPE TO ACCOMMODATE DRAINAGE - FILL WITH PEA STONE, 5' O.C. OR AS SHOWN ON PLANS
GRANITE ROADWAY CURB, SEE CONSTRUCTION DETAILS
SAW GRAN. FACE MIN. 4"
COMPACTED GRAVEL BORROW - TYPE B
4"
8"

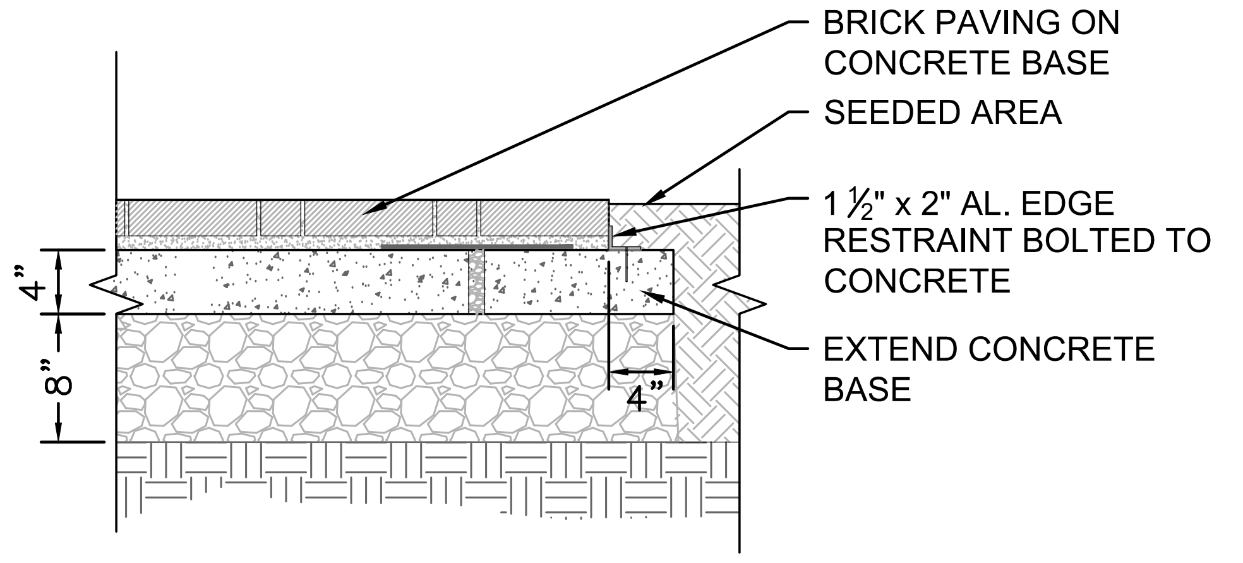
BRICK PAVING AT ROADWAY CURB

SCALE: 1"=1'-0"


SAW GRAN. FACE MIN. 4"
48" FROM BACK OF CURB (TYP.)
4"
6"
BRICK PAVING ON CONCRETE BASE
CEMENT CONCRETE PAVEMENT, SEE CONSTRUCTION DETAILS
GRANITE CURB, SEE CONSTRUCTION DETAILS
EXISTING SUBGRADE

BRICK PAVING BAND AT CEMENT CONCRETE SIDEWALK

SCALE: 1"=1'-0"


BRICK PAVING ON CONCRETE BASE
SEEDED AREA
1½" x 2" AL. EDGE RESTRAINT BOLTED TO CONCRETE
EXTEND CONCRETE BASE
4"
8"
4"

BRICK PAVING EDGE RESTRAINT

SCALE: 1"=1'-0"

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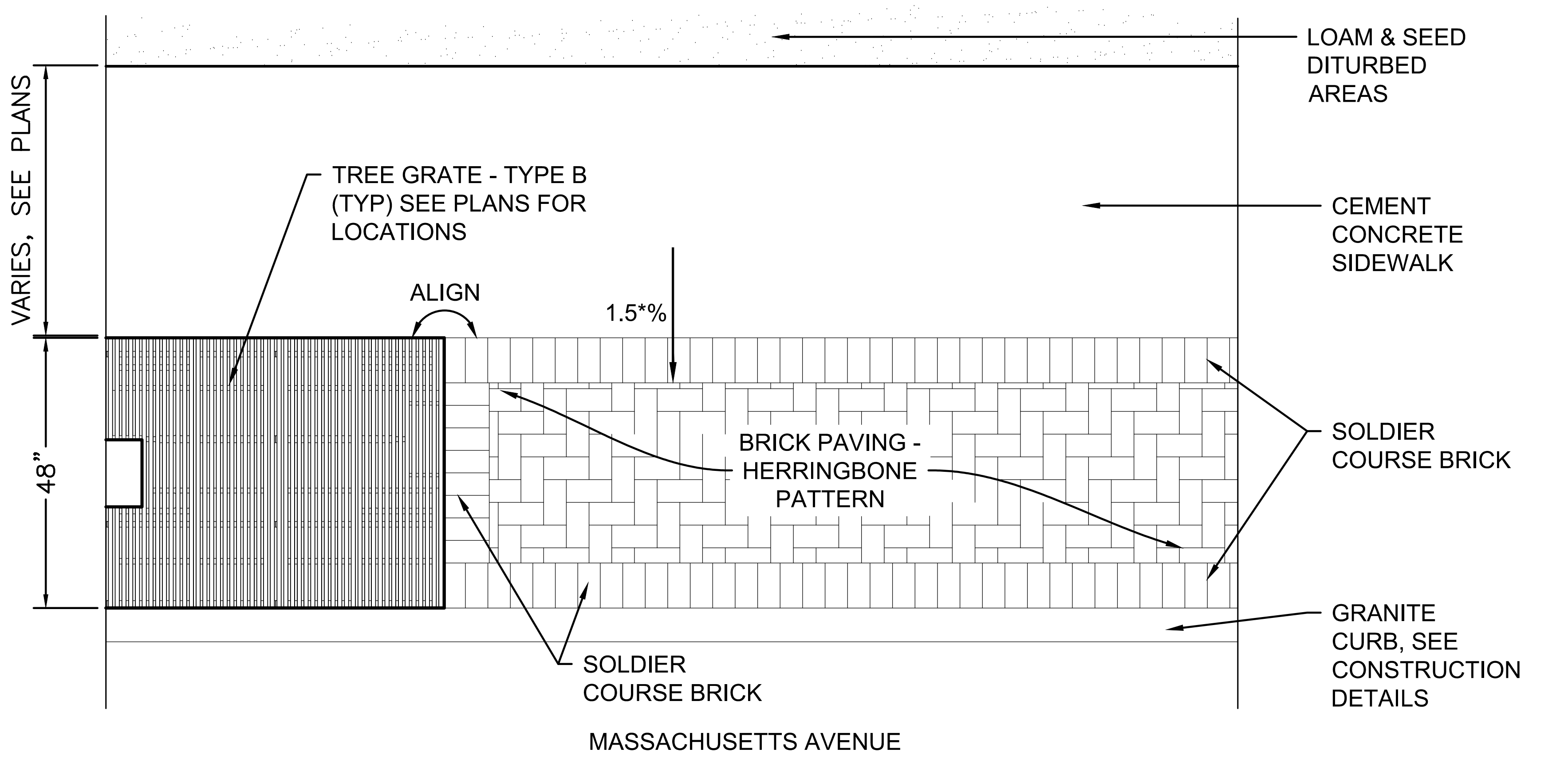
TITLE
TOWN CENTER IMPROVEMENTS
PAVEMENT DETAILS
LEXINGTON, MASSACHUSETTS

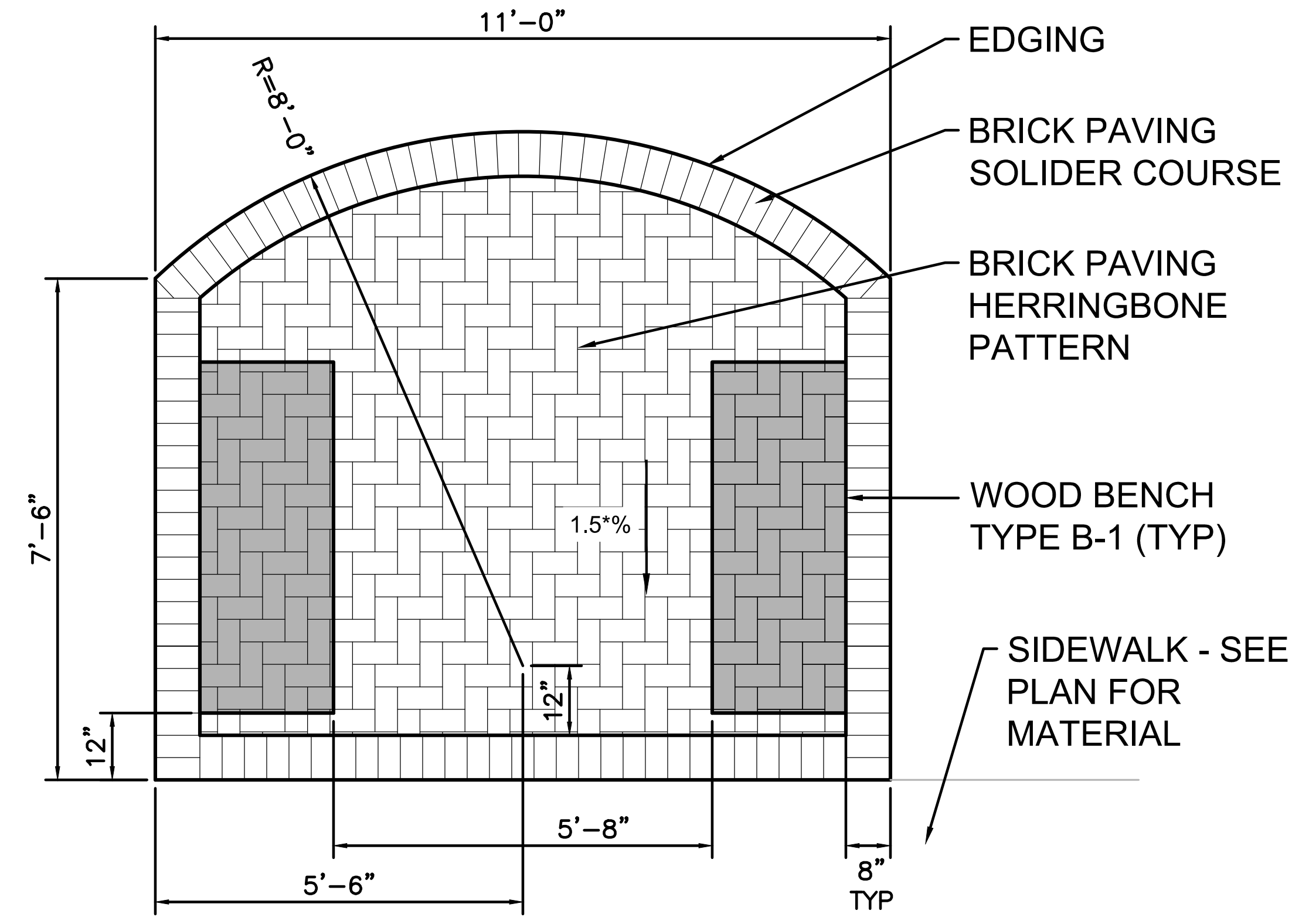
BETA JOB NO. 6331
ISSUE DATE 02/05/2021
SHEET NO. 58 OF 92

2/8/2021 12:23 PM O:\6300S\6331 - LEXINGTON CENTER STREETSCAPE\DRAWING FILES\PLANSET\6331 SITE DETAILS.DWG (BETA STB BW.STB)


LOAM & SEED DITURBED AREAS
VARIES, SEE PLANS
TREE GRATE - TYPE B (TYP) SEE PLANS FOR LOCATIONS
CEMENT CONCRETE SIDEWALK
ALIGN
1.5%
48"
BRICK PAVING - HERRINGBONE PATTERN
SOLDIER COURSE BRICK
GRANITE CURB, SEE CONSTRUCTION DETAILS
SOLDIER COURSE BRICK
MASSACHUSETTS AVENUE

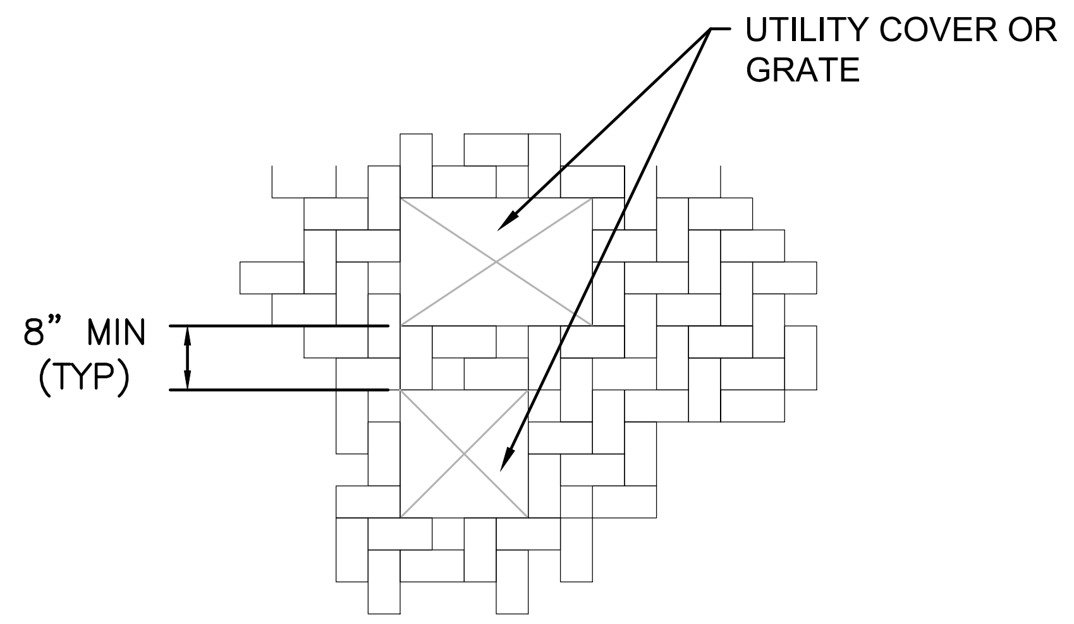
BRICK PAVING BAND AT CEMENT CONCRETE SIDEWALK

SCALE: 1/2" = 1'-0"


11'-0"
R=8'-0"
EDGING
BRICK PAVING SOLIDER COURSE
BRICK PAVING HERRINGBONE PATTERN
WOOD BENCH TYPE B-1 (TYP)
1.5%
7'-6"
SIDEWALK - SEE PLAN FOR MATERIAL
12"
12"
5'-8"
5'-6"
8" TYP

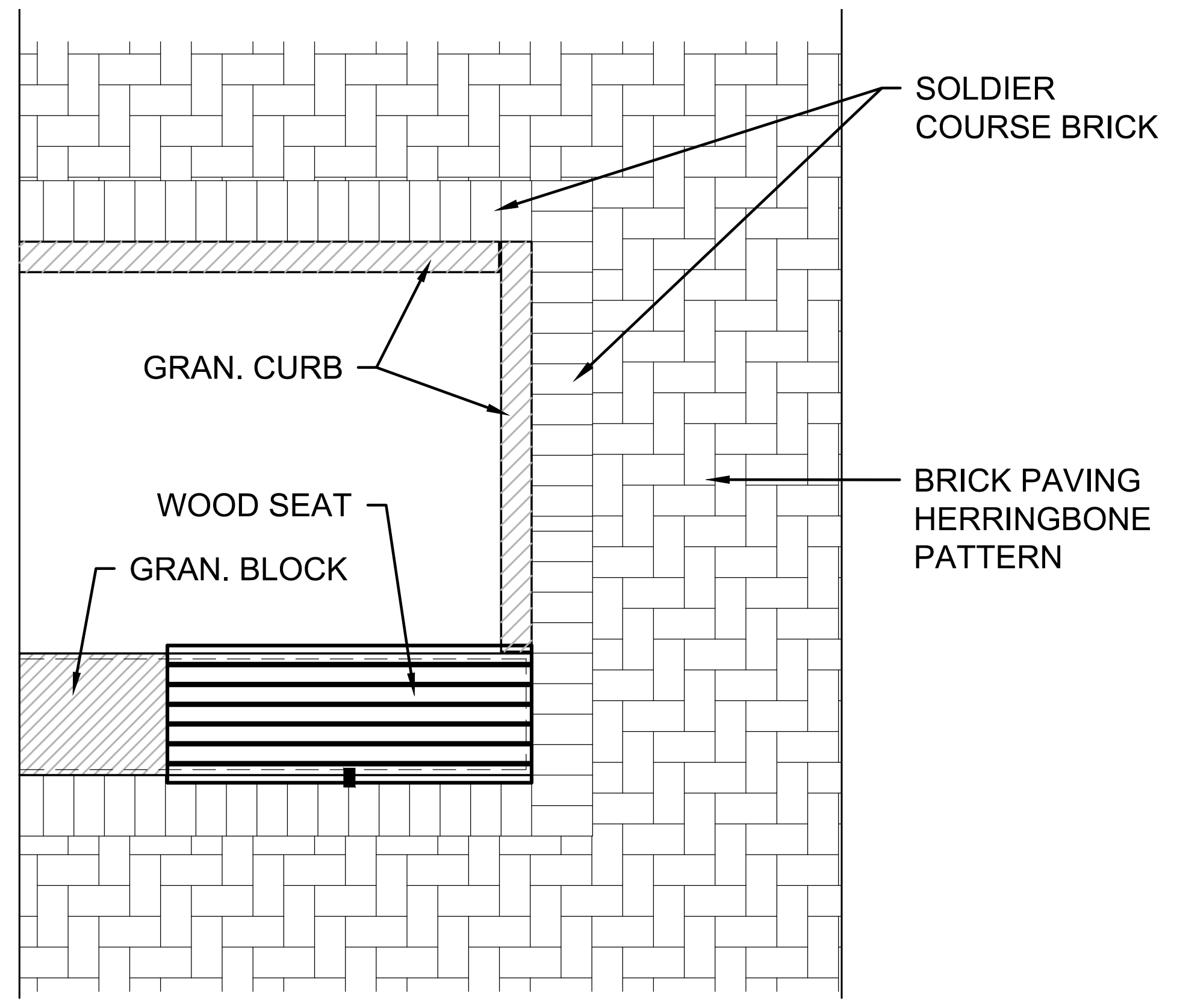
SEATING AREA - POST OFFICE

SCALE: 3/8"=1'



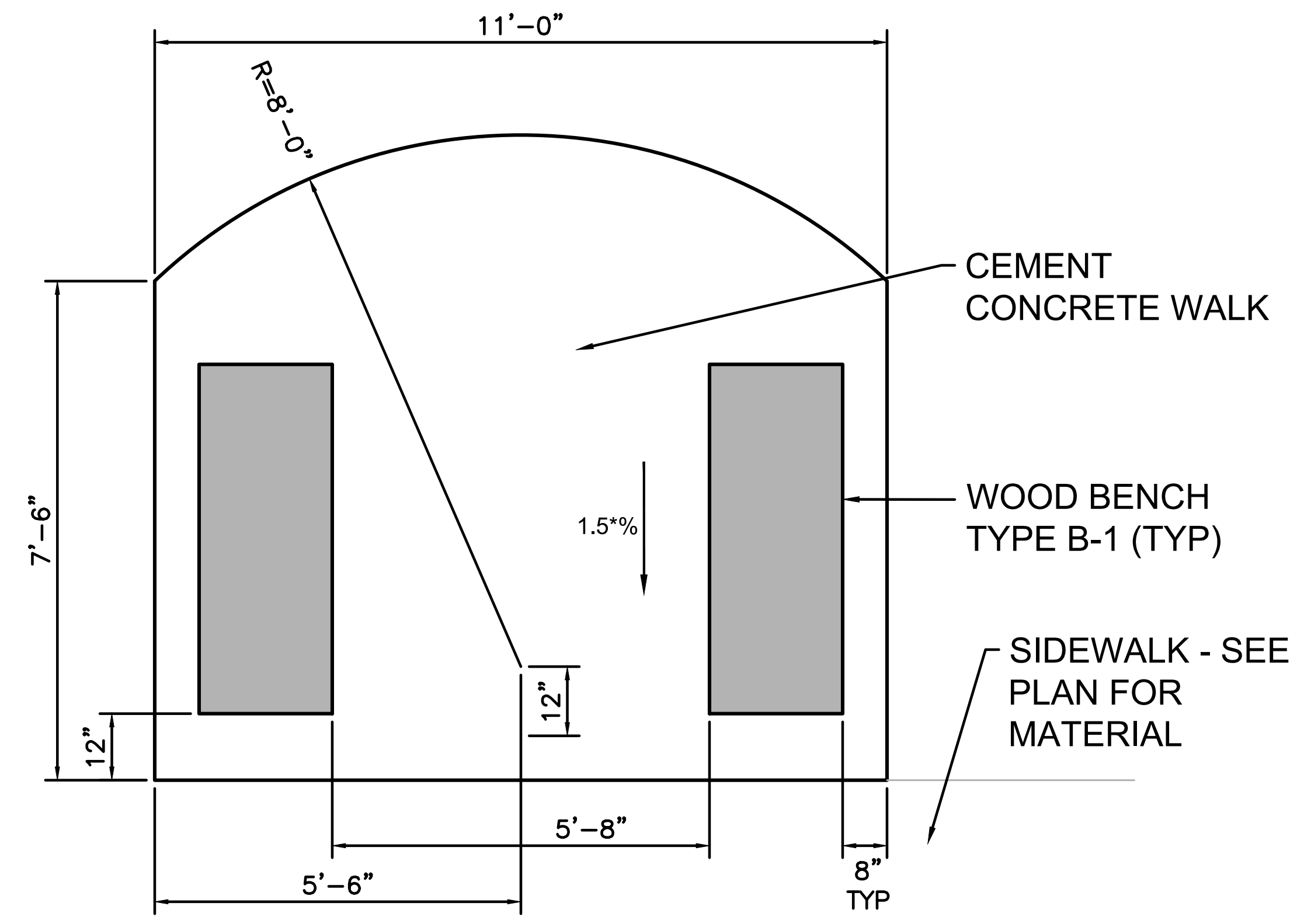
BRICKS AT RECTANGULAR UTILITY COVERS/GRATES

NOT TO SCALE



BRICK PAVING AT BENCH PLANTER - TYPICAL

SCALE: 1/2"=1'-0"

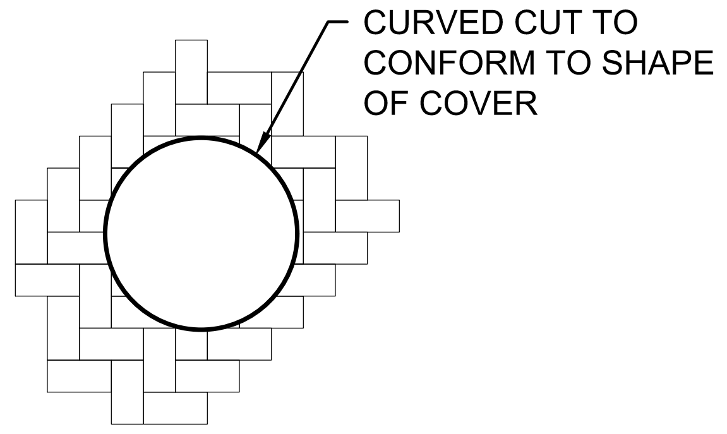


SEATING AREA - CARY HALL

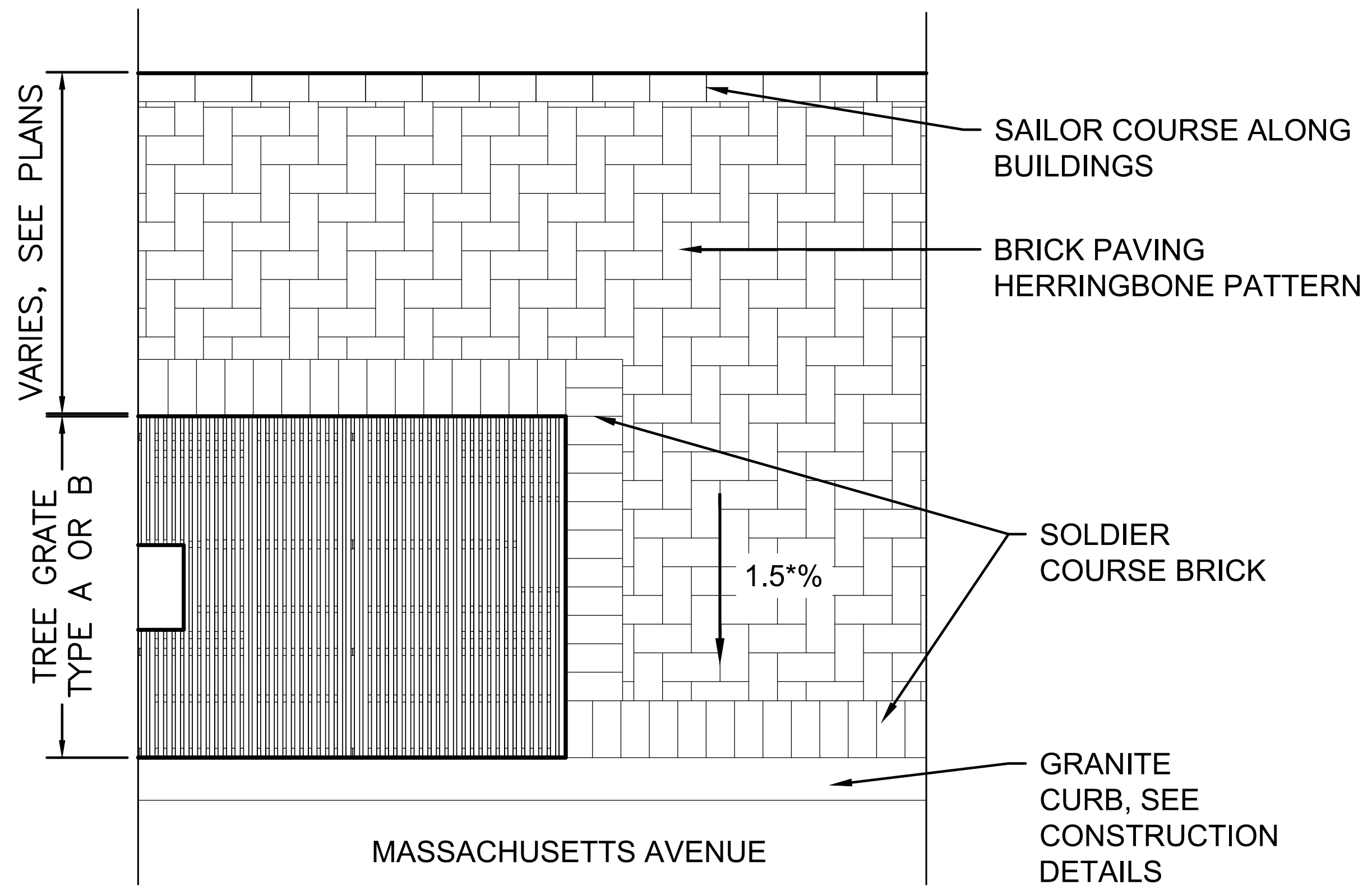
SCALE: 3/8"=1'

NOTES:

1. BRICK PAVING PATTERN AT UTILITY COVERS SHALL BE CUT TO MAINTAIN SPECIFIED JOINTING BETWEEN PAVER & COVER.
2. BRICK PAVERS AT SQUARE & RECTANGULAR COVERS SHALL HAVE STRAIGHT CUTS & MIN. ALLOWABLE SIZES ARE 2" WIDTH & 2" LENGTH.
3. BRICK PAVERS AT ROUND COVERS SHALL HAVE CURVED CUTS TO FOLLOW THE SHAPE OF THE COVER AS CLOSELY AS POSSIBLE & MIN. ALLOWABLE SIZES ARE 2" WIDTH & 2" LENGTH.

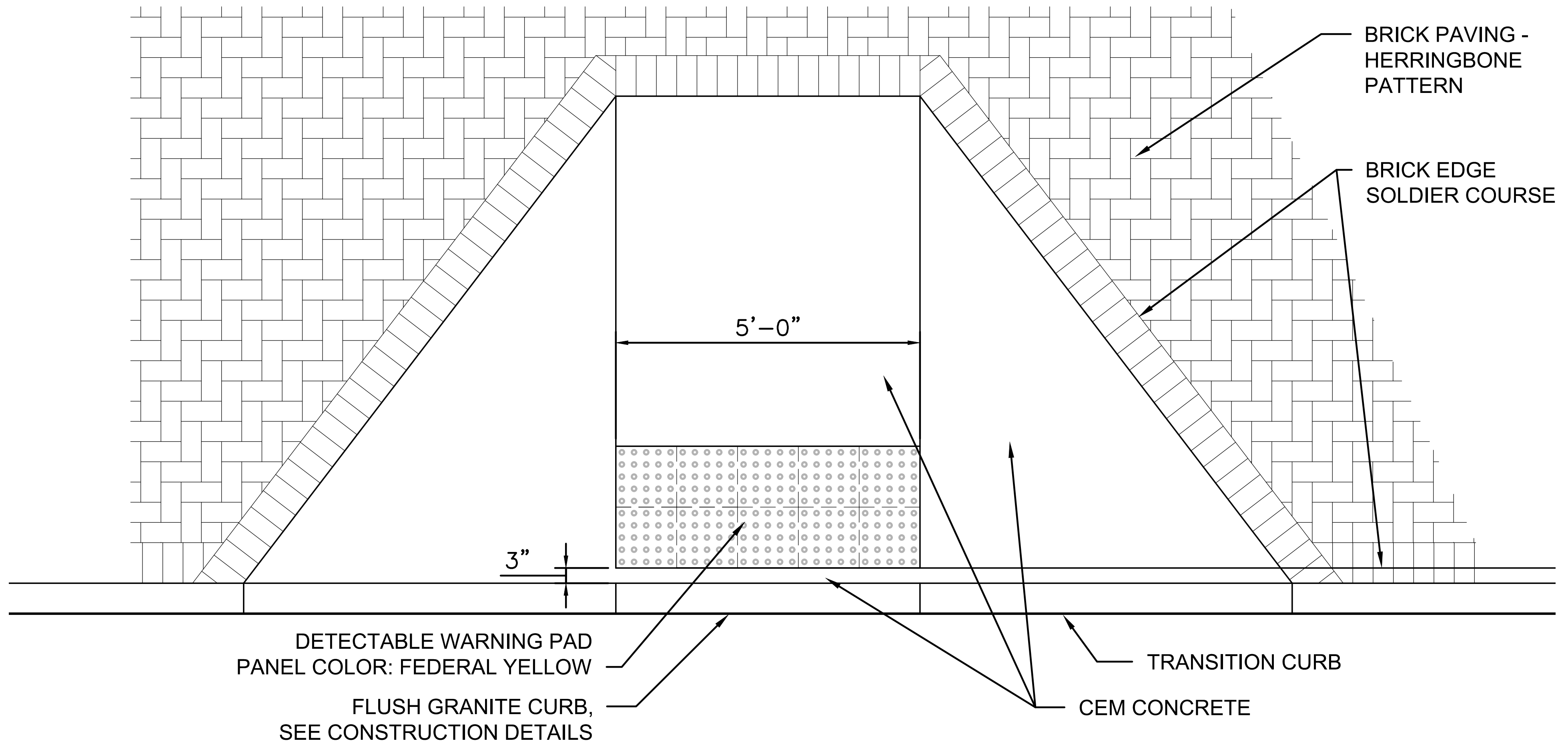


ROUND UTILITY COVER CUTS


VARIES, SEE PLANS
SAILOR COURSE ALONG BUILDINGS
BRICK PAVING HERRINGBONE PATTERN
TREE GRATE TYPE A OR B
SOLDIER COURSE BRICK
1.5%
GRANITE CURB, SEE CONSTRUCTION DETAILS
MASSACHUSETTS AVENUE

BRICK PAVING SIDEWALK

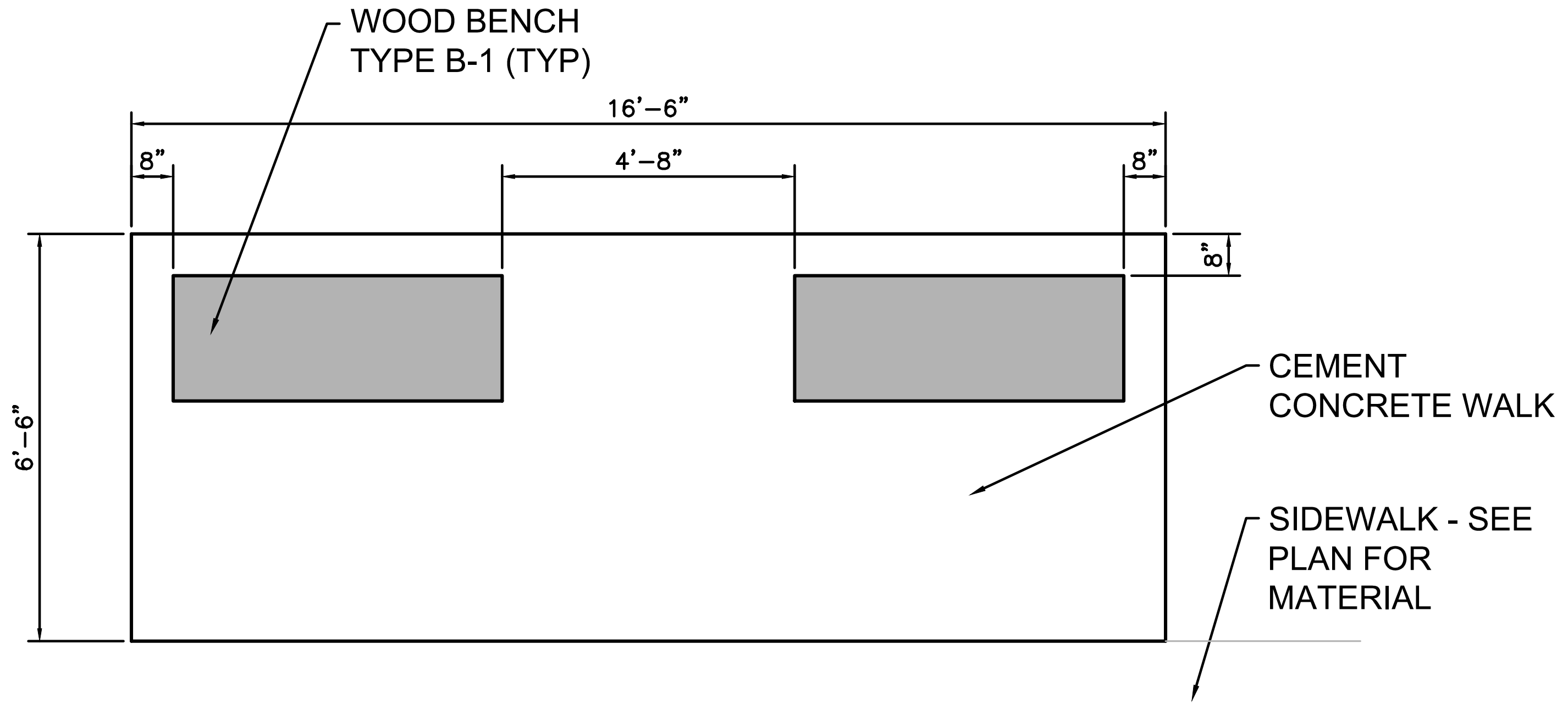
NOT TO SCALE


BRICK PAVING - HERRINGBONE PATTERN
BRICK EDGE SOLDIER COURSE
5'-0"
3"
DETECTABLE WARNING PAD PANEL COLOR: FEDERAL YELLOW
FLUSH GRANITE CURB, SEE CONSTRUCTION DETAILS
TRANSITION CURB
CEM CONCRETE

NOTE: REFER TO CONSTRUCTION PLANS/DETAILS FOR LAYOUT OF ALL ACCESSIBLE RAMPS

CEMENT CONCRETE WHEELCHAIR RAMP - TYPICAL

SCALE: 1/2" = 1'-0"



SEATING AREA AT TOWN HALL

SCALE: 3/8"=1'

NUMBER | DATE | MADE BY | CHECKED BY | REVISIONS

DRAWN BY: AP
DESIGNED BY: KC
CHECKED BY: DJ

REGISTERED PROFESSIONAL
KIEN Y. HO CIVIL ENGINEER
2/8/21

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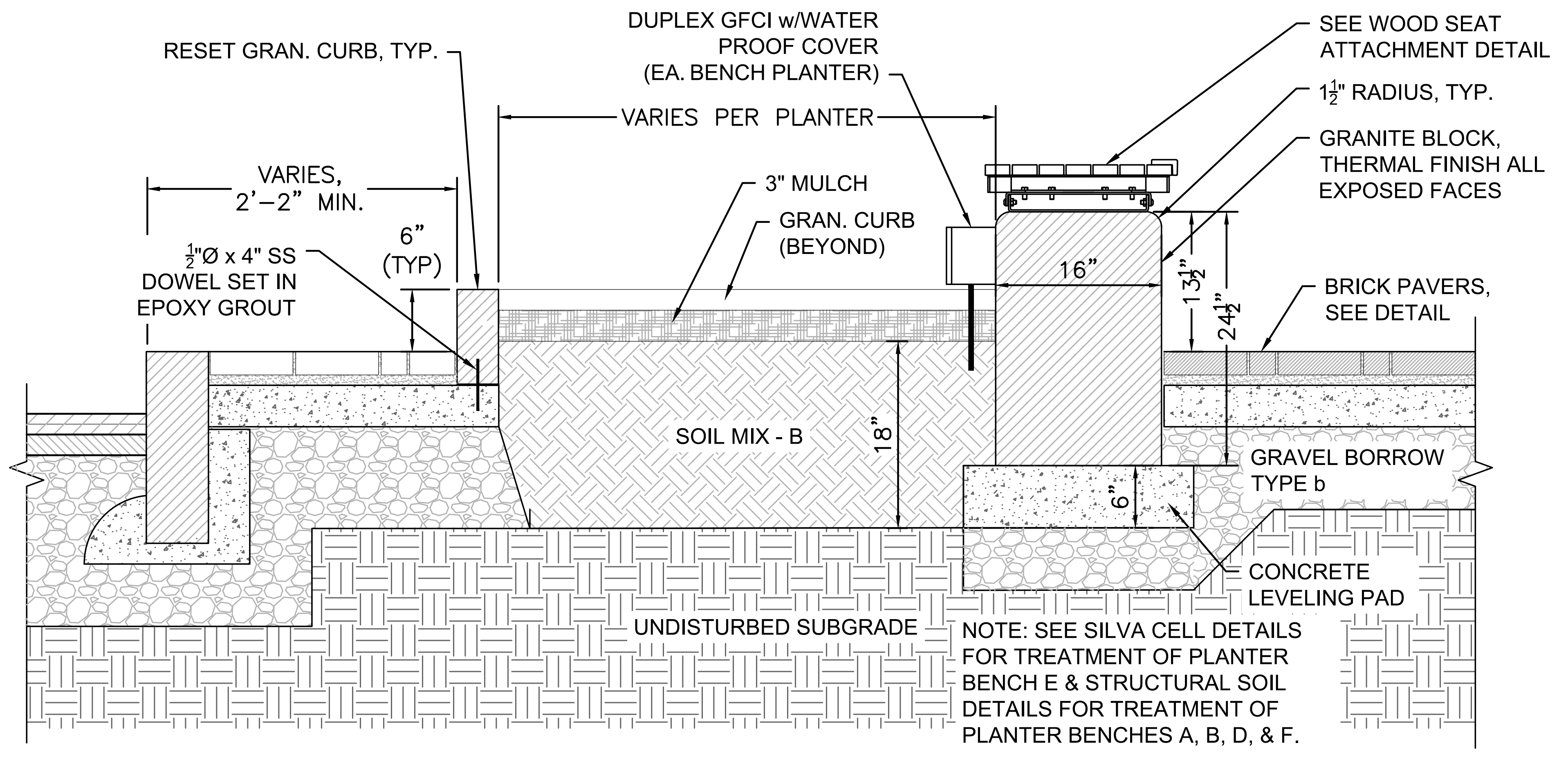
TITLE
TOWN CENTER IMPROVEMENTS
PAVEMENT DETAILS
LEXINGTON, MASSACHUSETTS

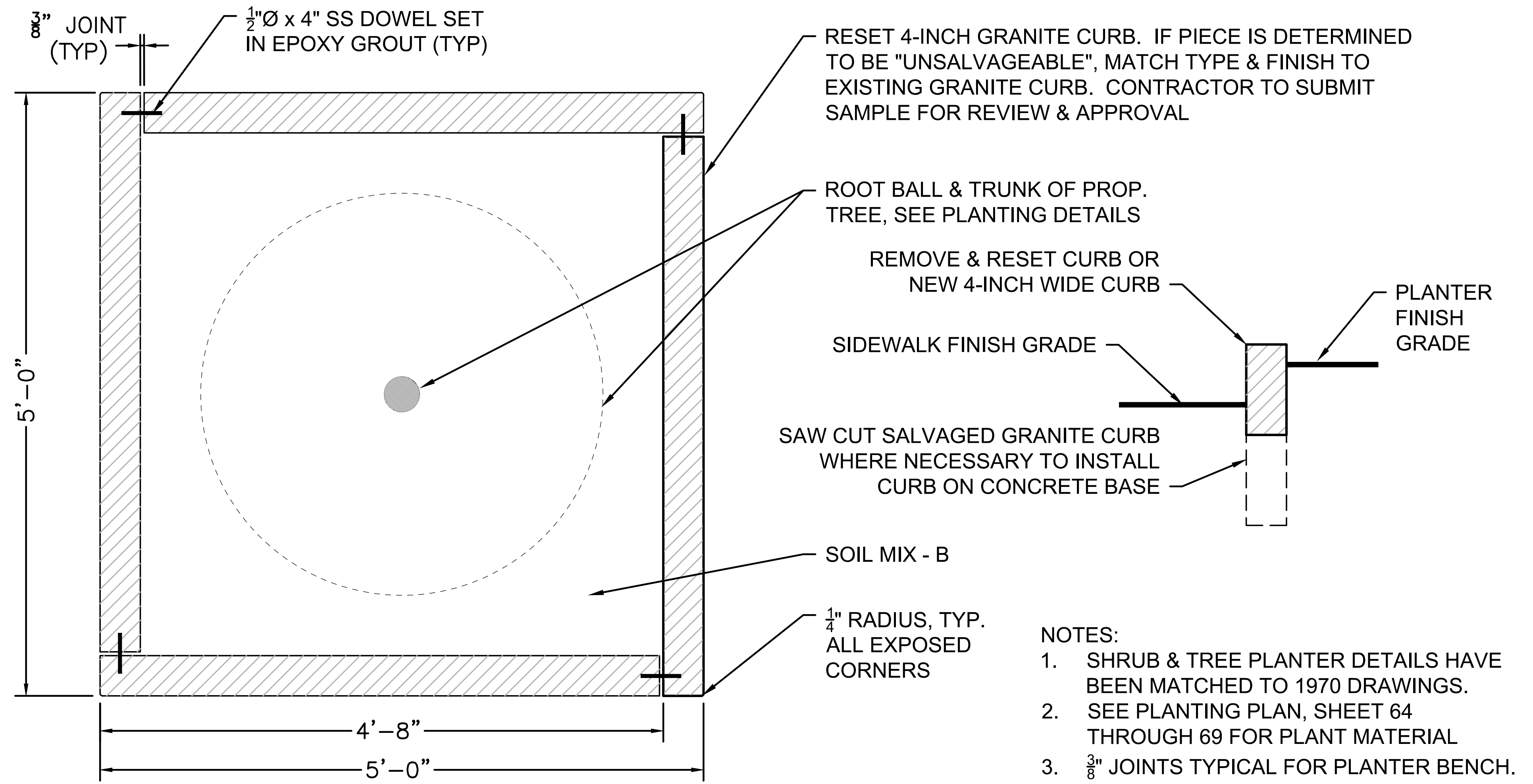
BETA JOB NO. 6331
ISSUE DATE 02/05/2021
SHEET NO. 59 OF 92

2/8/2021 12:24 PM O:\6300S\6331 - LEXINGTON CENTER STREETSCAPE\DRAWING FILES\PLANSET\6331 SITE DETAILS.DWG (BETA STB BW.STB)


RESET GRAN. CURB, TYP.
DUPLEX GFCI w/WATER PROOF COVER (EA. BENCH PLANTER)
SEE WOOD SEAT ATTACHMENT DETAIL
1½" RADIUS, TYP.
GRANITE BLOCK, THERMAL FINISH ALL EXPOSED FACES
VARIES PER PLANTER
VARIES, 2'–2" MIN.
3" MULCH
GRAN. CURB (BEYOND)
6" (TYP)
½"Ø x 4" SS DOWEL SET IN EPOXY GROUT
16"
13½"
24½"
BRICK PAVERS, SEE DETAIL
SOIL MIX - B
18"
6"
GRAVEL BORROW TYPE b
CONCRETE LEVELING PAD
UNDISTURBED SUBGRADE
NOTE: SEE SILVA CELL DETAILS FOR TREATMENT OF PLANTER BENCH E & STRUCTURAL SOIL DETAILS FOR TREATMENT OF PLANTER BENCHES A, B, D, & F.

BENCH PLANTERS C & G - TYPICAL - SECTION

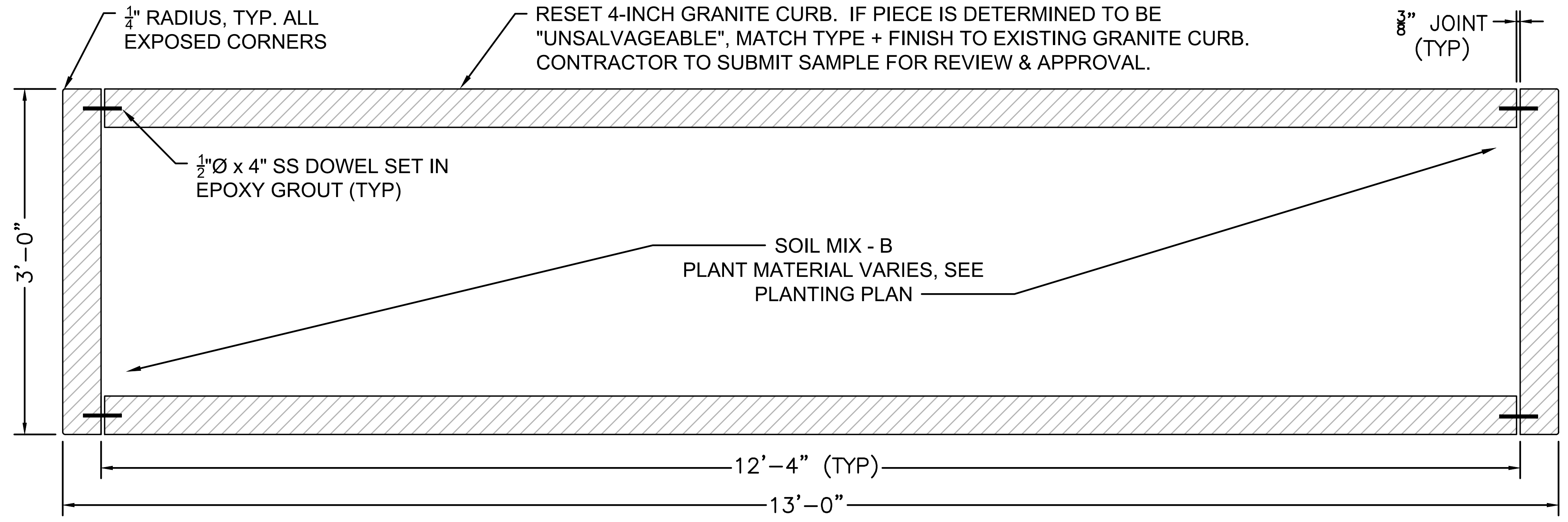
SCALE: 1"=1'-0"


⅜" JOINT (TYP)
½"Ø x 4" SS DOWEL SET IN EPOXY GROUT (TYP)
RESET 4-INCH GRANITE CURB. IF PIECE IS DETERMINED TO BE "UNSALVAGEABLE", MATCH TYPE & FINISH TO EXISTING GRANITE CURB. CONTRACTOR TO SUBMIT SAMPLE FOR REVIEW & APPROVAL
ROOT BALL & TRUNK OF PROP. TREE, SEE PLANTING DETAILS
REMOVE & RESET CURB OR NEW 4-INCH WIDE CURB
PLANTER FINISH GRADE
SIDEWALK FINISH GRADE
SAW CUT SALVAGED GRANITE CURB WHERE NECESSARY TO INSTALL CURB ON CONCRETE BASE
SOIL MIX - B
¼" RADIUS, TYP. ALL EXPOSED CORNERS
5'–0"
4'–8"
5'–0"

NOTES:
1. SHRUB & TREE PLANTER DETAILS HAVE BEEN MATCHED TO 1970 DRAWINGS.
2. SEE PLANTING PLAN, SHEET 64 THROUGH 69 FOR PLANT MATERIAL
3. ⅜" JOINTS TYPICAL FOR PLANTER BENCH.
4. SEE SILVA CELL DETAILS FOR SHRUB AND TREE DETAIL SECTION.

TREE PLANTER DETAIL

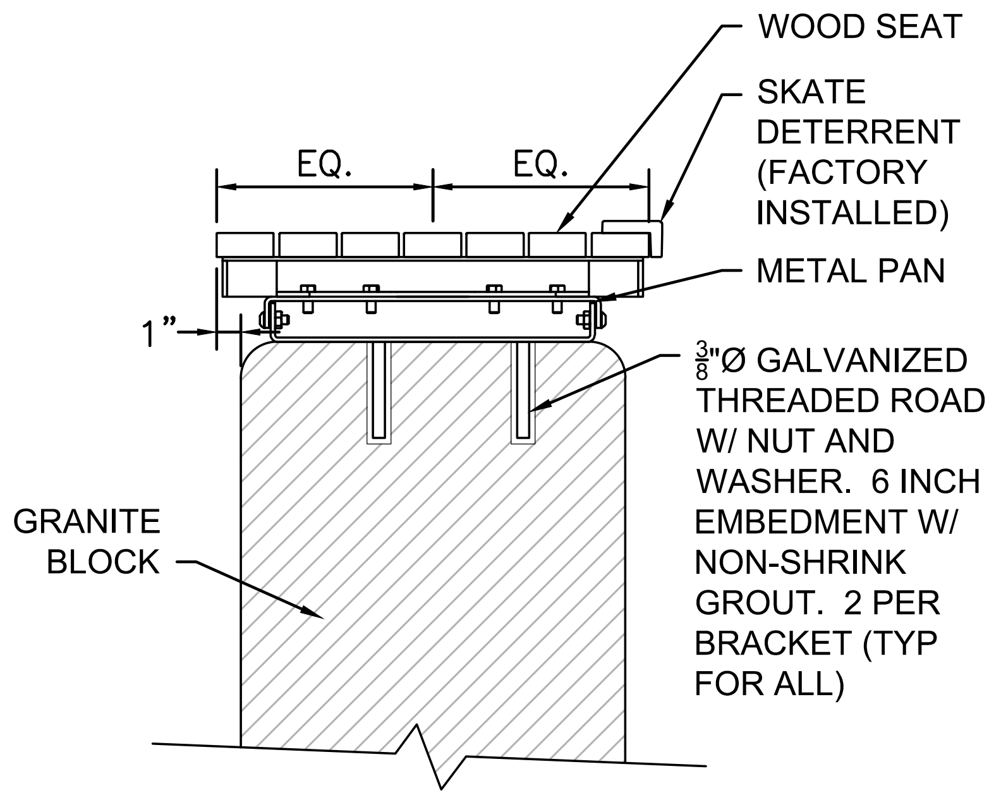
SCALE: 1"=1'-0"


¼" RADIUS, TYP. ALL EXPOSED CORNERS
RESET 4-INCH GRANITE CURB. IF PIECE IS DETERMINED TO BE "UNSALVAGEABLE", MATCH TYPE + FINISH TO EXISTING GRANITE CURB. CONTRACTOR TO SUBMIT SAMPLE FOR REVIEW & APPROVAL.
⅜" JOINT (TYP)
½"Ø x 4" SS DOWEL SET IN EPOXY GROUT (TYP)
SOIL MIX - B PLANT MATERIAL VARIES, SEE PLANTING PLAN
3'–0"
12'–4" (TYP)
13'–0"

NOTES:
1. SHRUB & TREE PLANTER DETAILS HAVE BEEN MATCHED TO 1970 DRAWINGS.
2. SEE PLANTING PLAN, SHEET 64 THROUGH 69 FOR PLANT MATERIAL

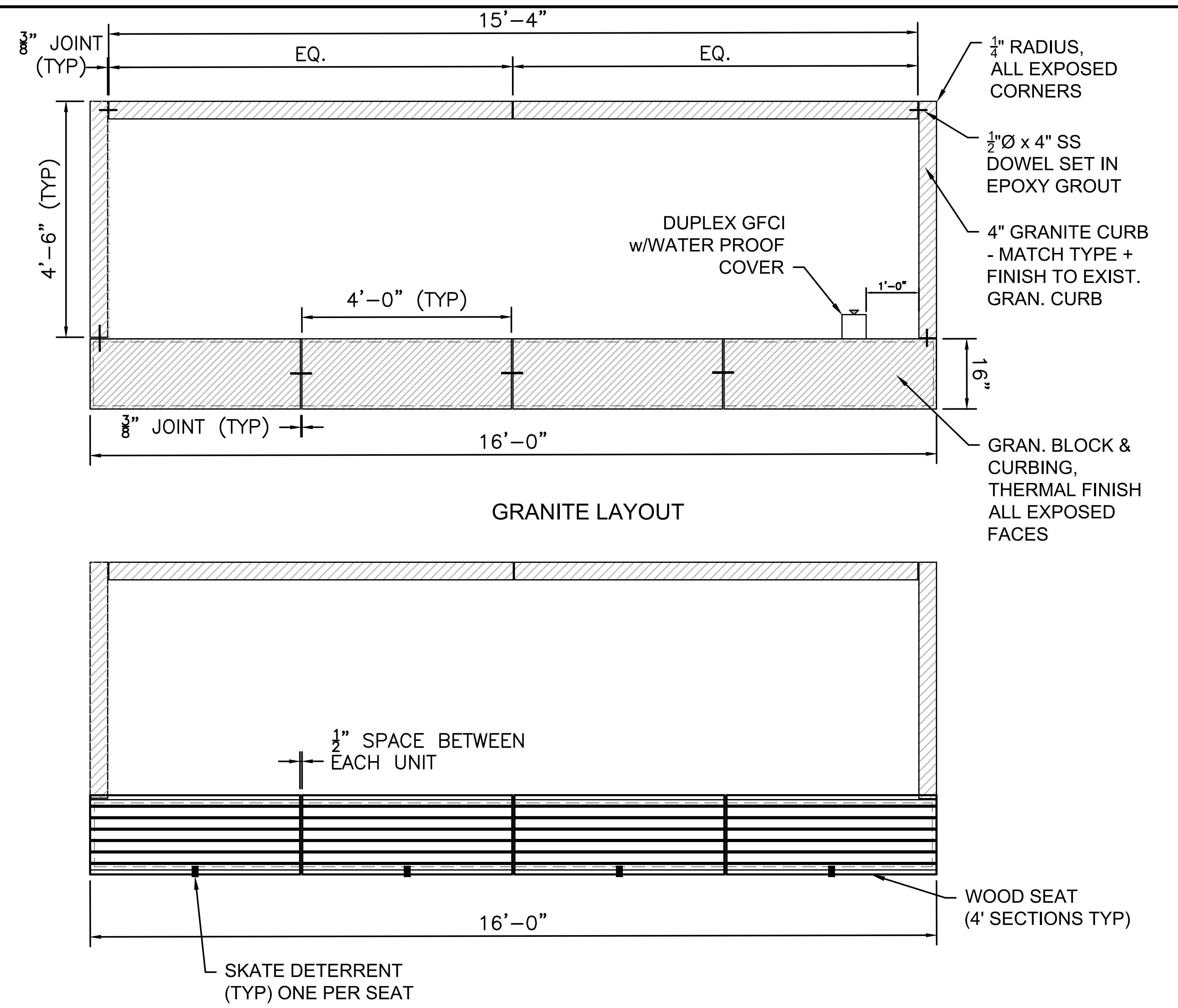
SHRUB PLANTER DETAIL

SCALE: 1"=1'-0"


WOOD SEAT
SKATE DETERRENT (FACTORY INSTALLED)
EQ.
EQ.
METAL PAN
1"
⅜"Ø GALVANIZED THREADED ROAD W/ NUT AND WASHER. 6 INCH EMBEDMENT W/ NON-SHRINK GROUT. 2 PER BRACKET (TYP FOR ALL)
GRANITE BLOCK

WOOD SEAT ATTACHMENT DETAIL

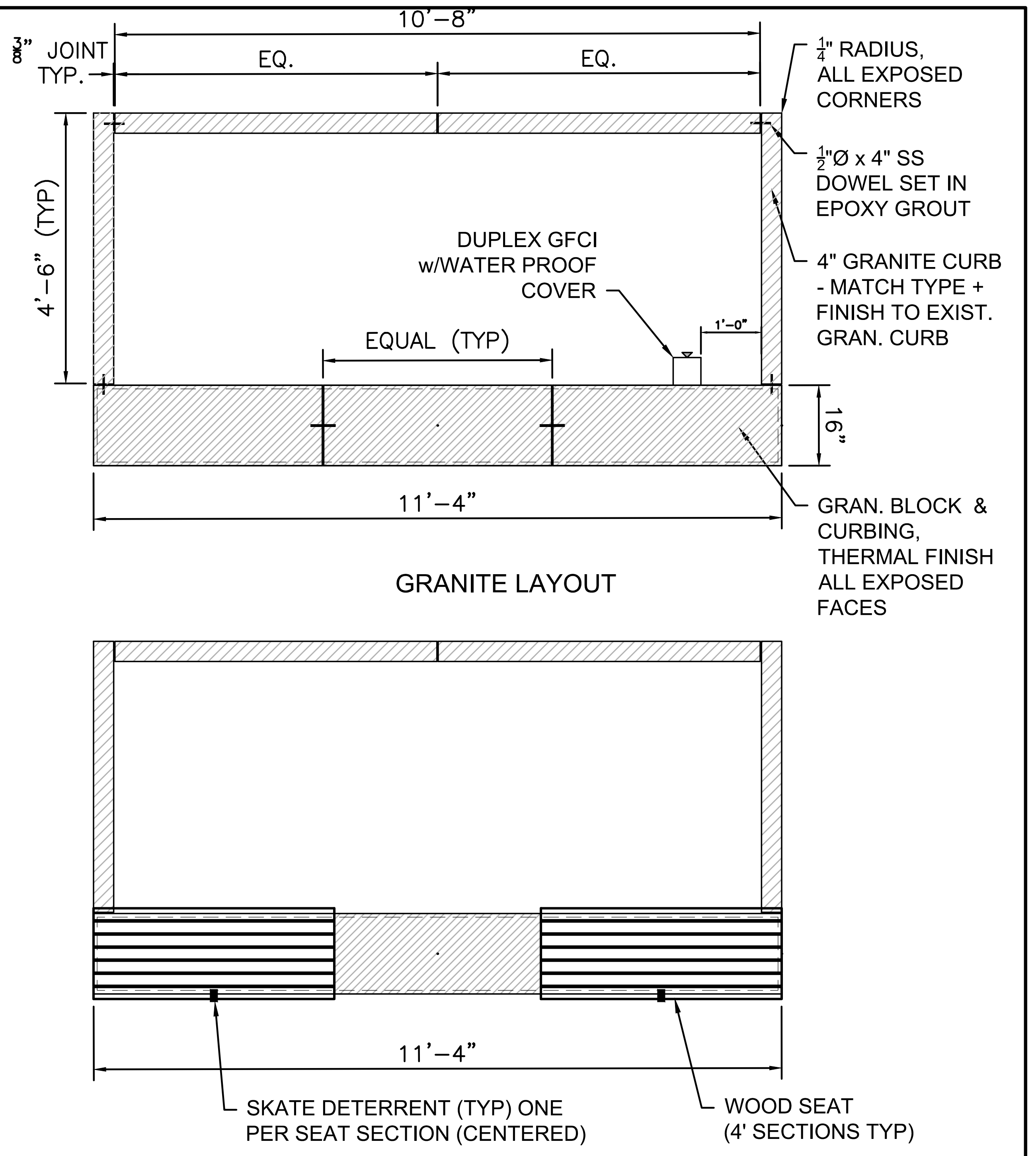
SCALE: ½"=1'-0"


⅜" JOINT (TYP)
15'–4"
EQ.
EQ.
¼" RADIUS, ALL EXPOSED CORNERS
½"Ø x 4" SS DOWEL SET IN EPOXY GROUT
4" GRANITE CURB - MATCH TYPE + FINISH TO EXIST. GRAN. CURB
4'–6" (TYP)
DUPLEX GFCI w/WATER PROOF COVER
1'–0"
4'–0" (TYP)
16"
⅜" JOINT (TYP)
16'–0"
GRAN. BLOCK & CURBING, THERMAL FINISH ALL EXPOSED FACES
GRANITE LAYOUT
½" SPACE BETWEEN EACH UNIT
WOOD SEAT (4' SECTIONS TYP)
16'–0"
SKATE DETERRENT (TYP) ONE PER SEAT SECTION (CENTERED)

BENCH LAYOUT

BENCH PLANTER - A

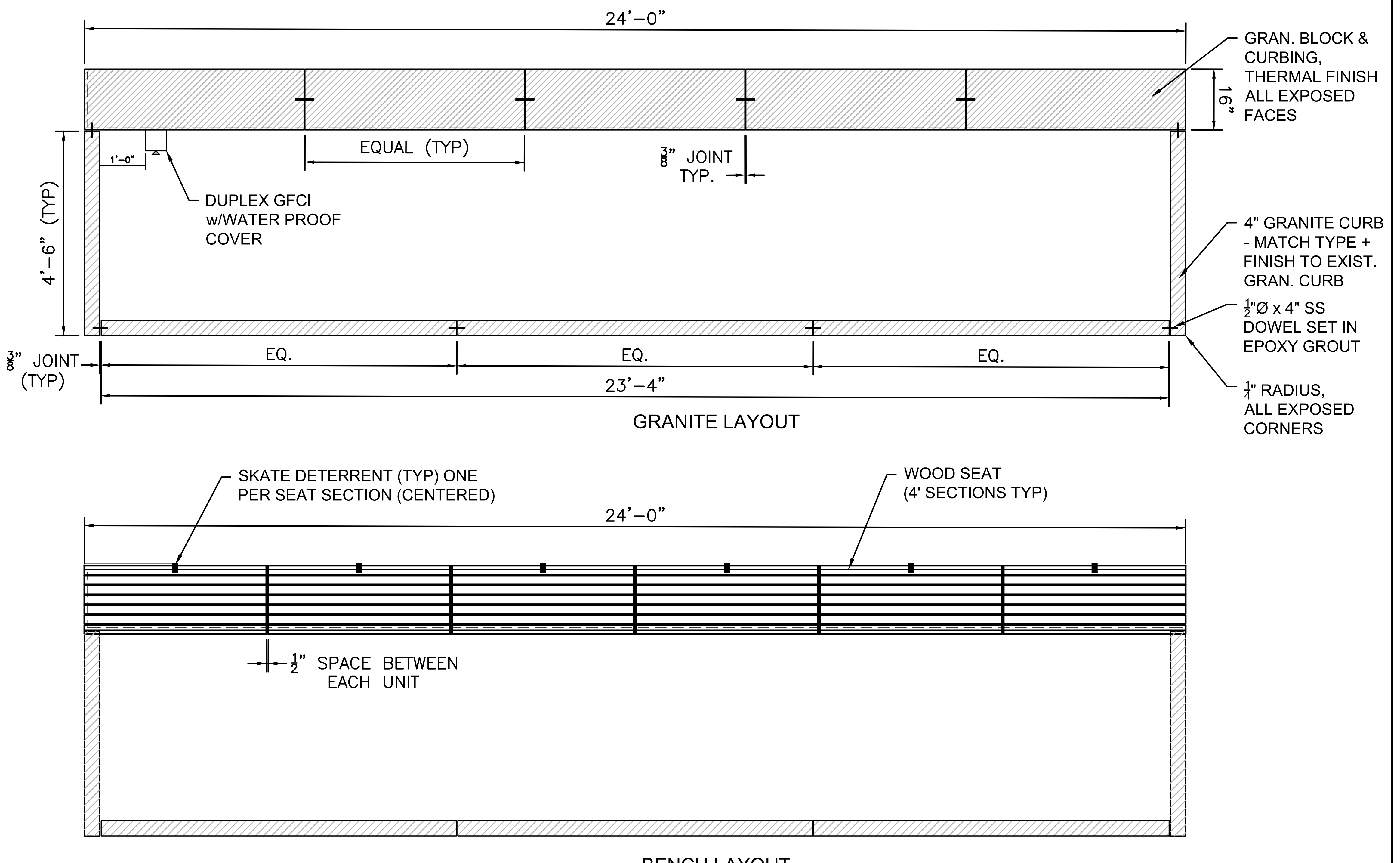
SCALE: ½"=1'-0"


⅜" JOINT TYP.
10'–8"
EQ.
EQ.
¼" RADIUS, ALL EXPOSED CORNERS
½"Ø x 4" SS DOWEL SET IN EPOXY GROUT
4" GRANITE CURB - MATCH TYPE + FINISH TO EXIST. GRAN. CURB
4'–6" (TYP)
DUPLEX GFCI w/WATER PROOF COVER
1'–0"
EQUAL (TYP)
16"
11'–4"
GRAN. BLOCK & CURBING, THERMAL FINISH ALL EXPOSED FACES
GRANITE LAYOUT
11'–4"
SKATE DETERRENT (TYP) ONE PER SEAT SECTION (CENTERED)
WOOD SEAT (4' SECTIONS TYP)

BENCH LAYOUT

BENCH PLANTER - B

SCALE: ½"=1'-0"


24'–0"
GRAN. BLOCK & CURBING, THERMAL FINISH ALL EXPOSED FACES
16"
1'–0"
DUPLEX GFCI w/WATER PROOF COVER
EQUAL (TYP)
⅜" JOINT TYP.
4'–6" (TYP)
4" GRANITE CURB - MATCH TYPE + FINISH TO EXIST. GRAN. CURB
½"Ø x 4" SS DOWEL SET IN EPOXY GROUT
⅜" JOINT (TYP)
EQ.
EQ.
EQ.
23'–4"
¼" RADIUS, ALL EXPOSED CORNERS
GRANITE LAYOUT
SKATE DETERRENT (TYP) ONE PER SEAT SECTION (CENTERED)
WOOD SEAT (4' SECTIONS TYP)
24'–0"
½" SPACE BETWEEN EACH UNIT

BENCH LAYOUT

BENCH PLANTER - C

SCALE: ½"=1'-0"

NUMBER	DATE	MADE BY	CHECKED BY	REVISIONS

DRAWN BY: XX
DESIGNED BY: XX
CHECKED BY: XX

REGISTERED PROFESSIONAL
KIEN Y. HO
CIVIL ENGINEER
2/8/21

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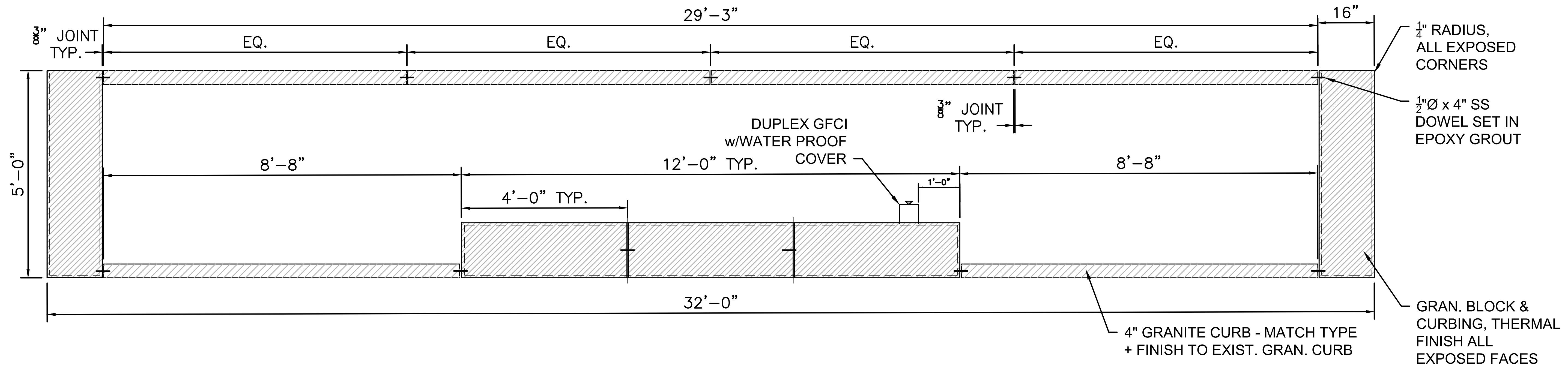
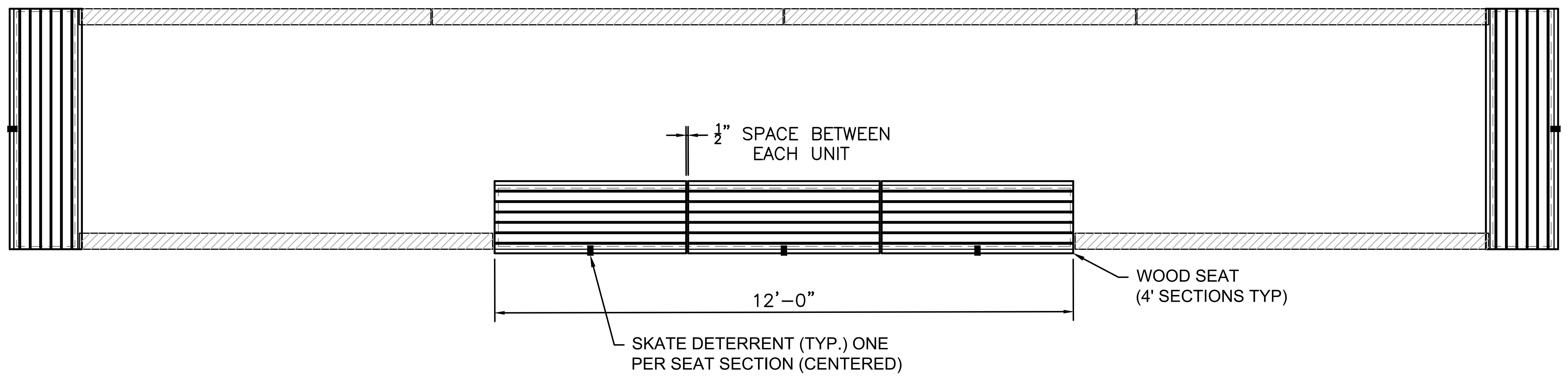
TOWN CENTER IMPROVEMENTS
GRANITE CURB PLANTER DETAILS
LEXINGTON, MASSACHUSETTS

BETA JOB NO. 6331
ISSUE DATE 02/05/2021
SHEET NO. 60 OF 92

2/8/2021 12:24 PM O:\6300S\6331 - LEXINGTON CENTER STREETSCAPE\DRAWING FILES\PLANSET\6331 PLANTER ENLARGEMENTS.DWG (BETA STB BW.STB)


29'–3"
16"
3/8" JOINT TYP.
EQ.
EQ.
EQ.
EQ.
1/4" RADIUS, ALL EXPOSED CORNERS
1/2"Ø x 4" SS DOWEL SET IN EPOXY GROUT
3/8" JOINT TYP.
DUPLEX GFCI w/WATER PROOF COVER
1'–0"
8'–8"
12'–0" TYP.
8'–8"
4'–0" TYP.
5'–0"
32'–0"
4" GRANITE CURB - MATCH TYPE + FINISH TO EXIST. GRAN. CURB
GRAN. BLOCK & CURBING, THERMAL FINISH ALL EXPOSED FACES

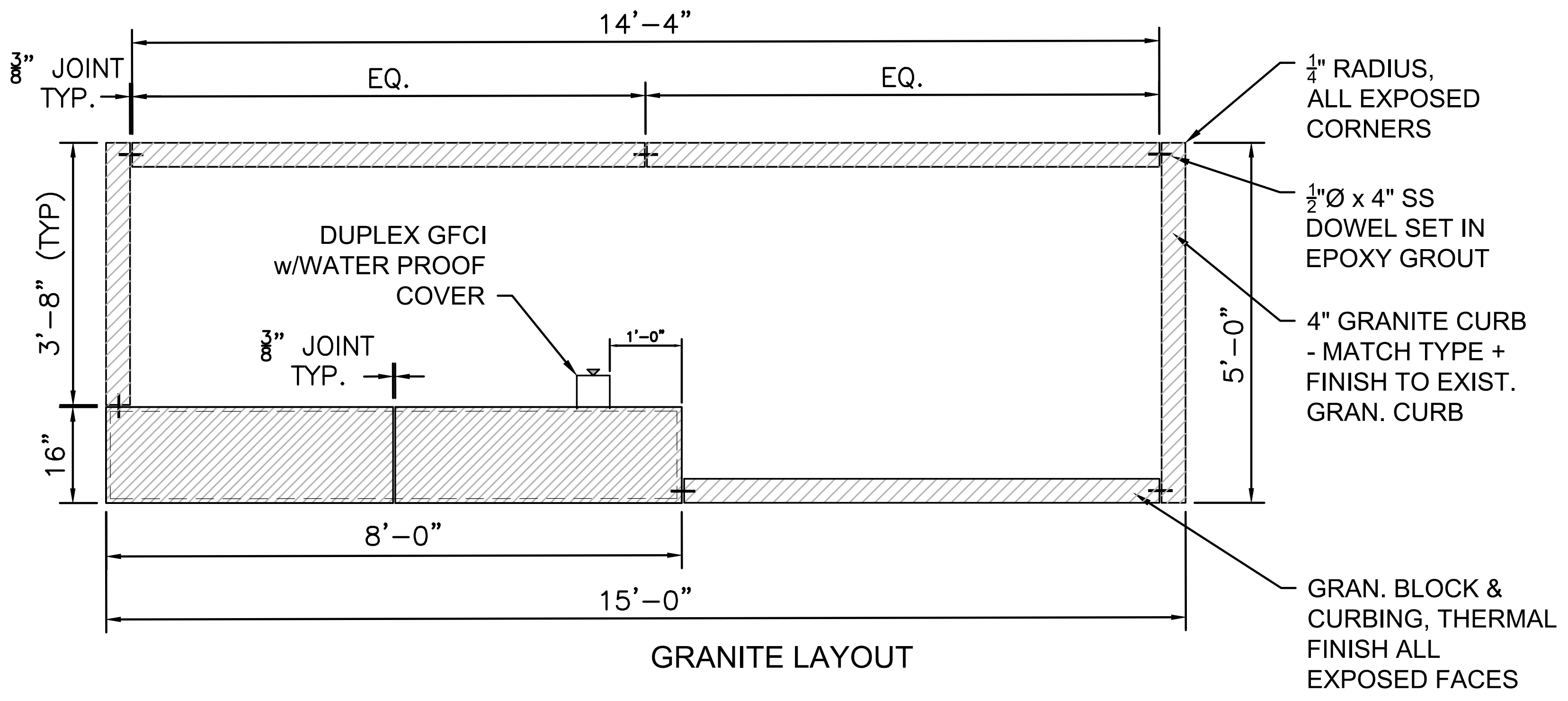
GRANITE LAYOUT


1/2" SPACE BETWEEN EACH UNIT
12'–0"
WOOD SEAT (4' SECTIONS TYP)
SKATE DETERRENT (TYP.) ONE PER SEAT SECTION (CENTERED)

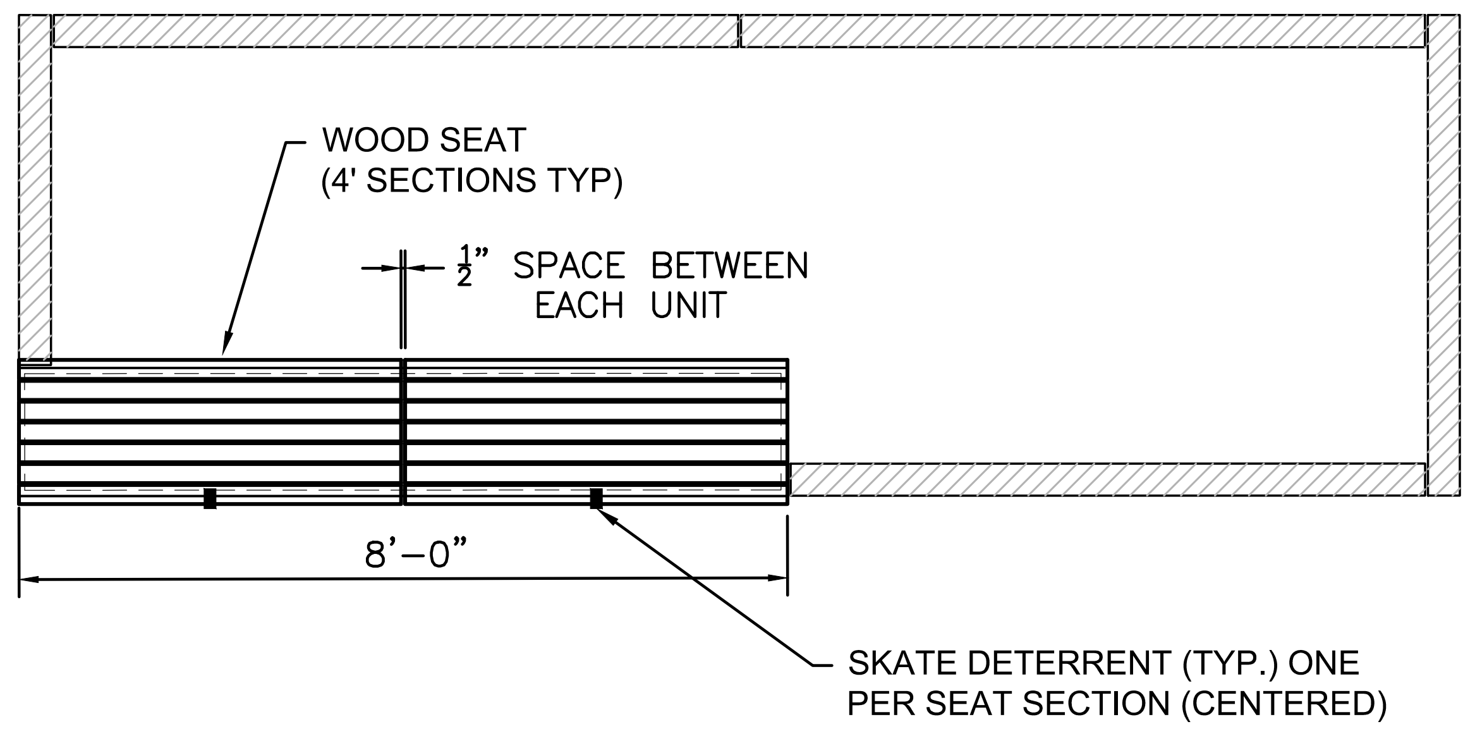
BENCH LAYOUT

BENCH PLANTER - D

SCALE: 1/2"=1'-0"


14'–4"
3/8" JOINT TYP.
EQ.
EQ.
1/4" RADIUS, ALL EXPOSED CORNERS
1/2"Ø x 4" SS DOWEL SET IN EPOXY GROUT
3'–8" (TYP)
DUPLEX GFCI w/WATER PROOF COVER
1'–0"
3/8" JOINT TYP.
4" GRANITE CURB - MATCH TYPE + FINISH TO EXIST. GRAN. CURB
5'–0"
16"
8'–0"
15'–0"
GRAN. BLOCK & CURBING, THERMAL FINISH ALL EXPOSED FACES

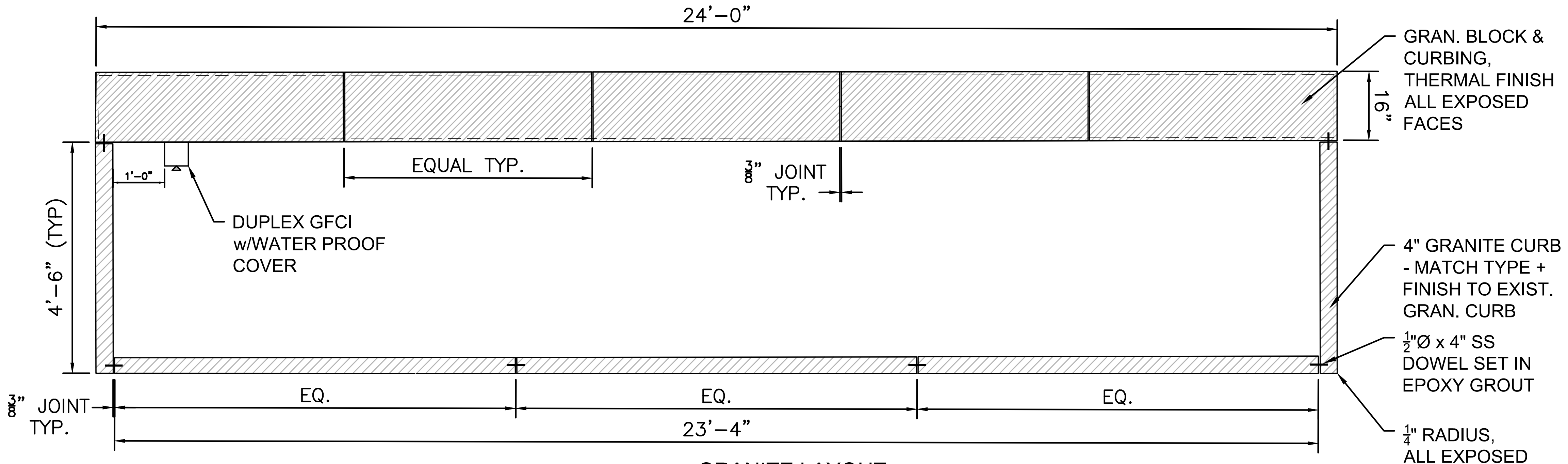
GRANITE LAYOUT


WOOD SEAT (4' SECTIONS TYP)
1/2" SPACE BETWEEN EACH UNIT
8'–0"
SKATE DETERRENT (TYP.) ONE PER SEAT SECTION (CENTERED)

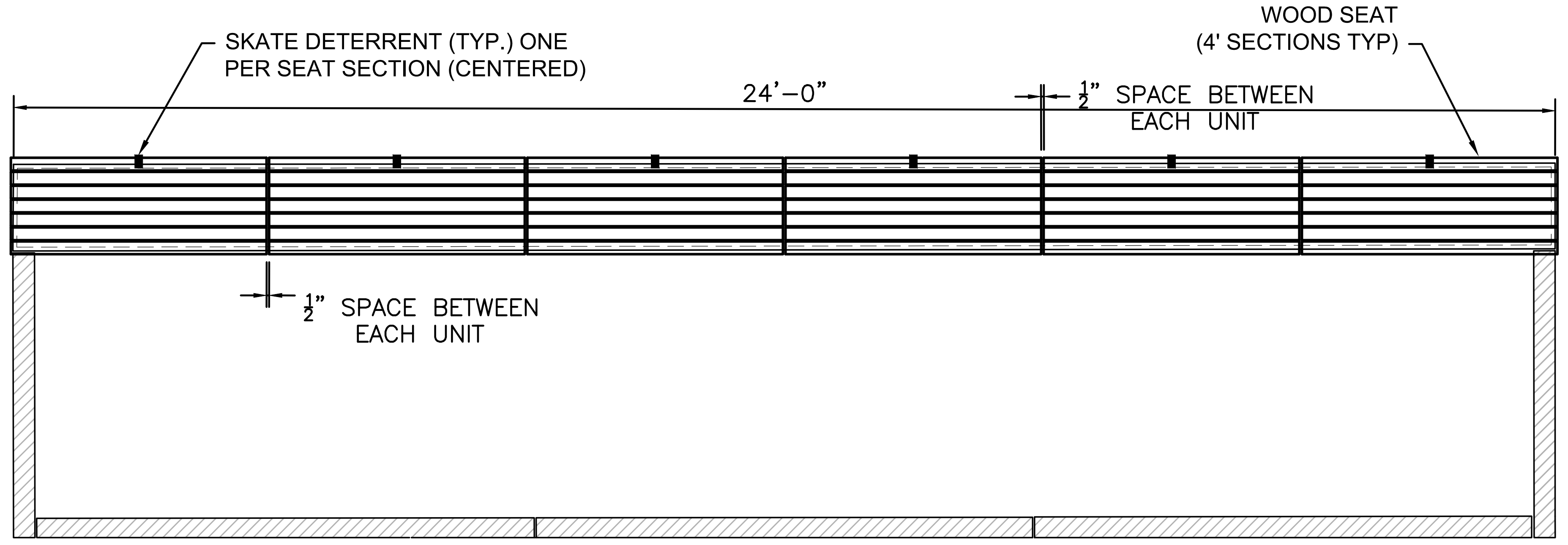
BENCH LAYOUT

BENCH PLANTER - F

SCALE: 1/2"=1'-0"


24'–0"
GRAN. BLOCK & CURBING, THERMAL FINISH ALL EXPOSED FACES
16"
1'–0"
EQUAL TYP.
3/8" JOINT TYP.
DUPLEX GFCI w/WATER PROOF COVER
4'–6" (TYP)
4" GRANITE CURB - MATCH TYPE + FINISH TO EXIST. GRAN. CURB
1/2"Ø x 4" SS DOWEL SET IN EPOXY GROUT
3/8" JOINT TYP.
EQ.
EQ.
EQ.
23'–4"
1/4" RADIUS, ALL EXPOSED CORNERS

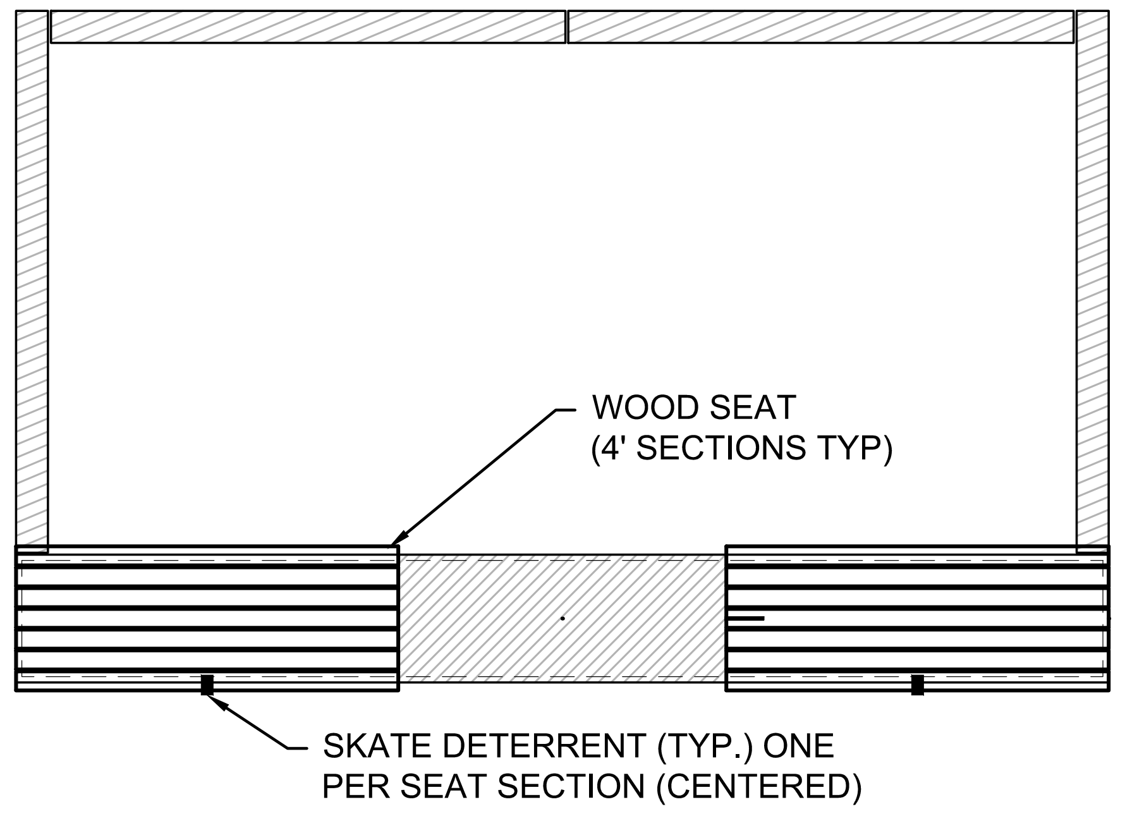
GRANITE LAYOUT


SKATE DETERRENT (TYP.) ONE PER SEAT SECTION (CENTERED)
WOOD SEAT (4' SECTIONS TYP)
24'–0"
1/2" SPACE BETWEEN EACH UNIT
1/2" SPACE BETWEEN EACH UNIT

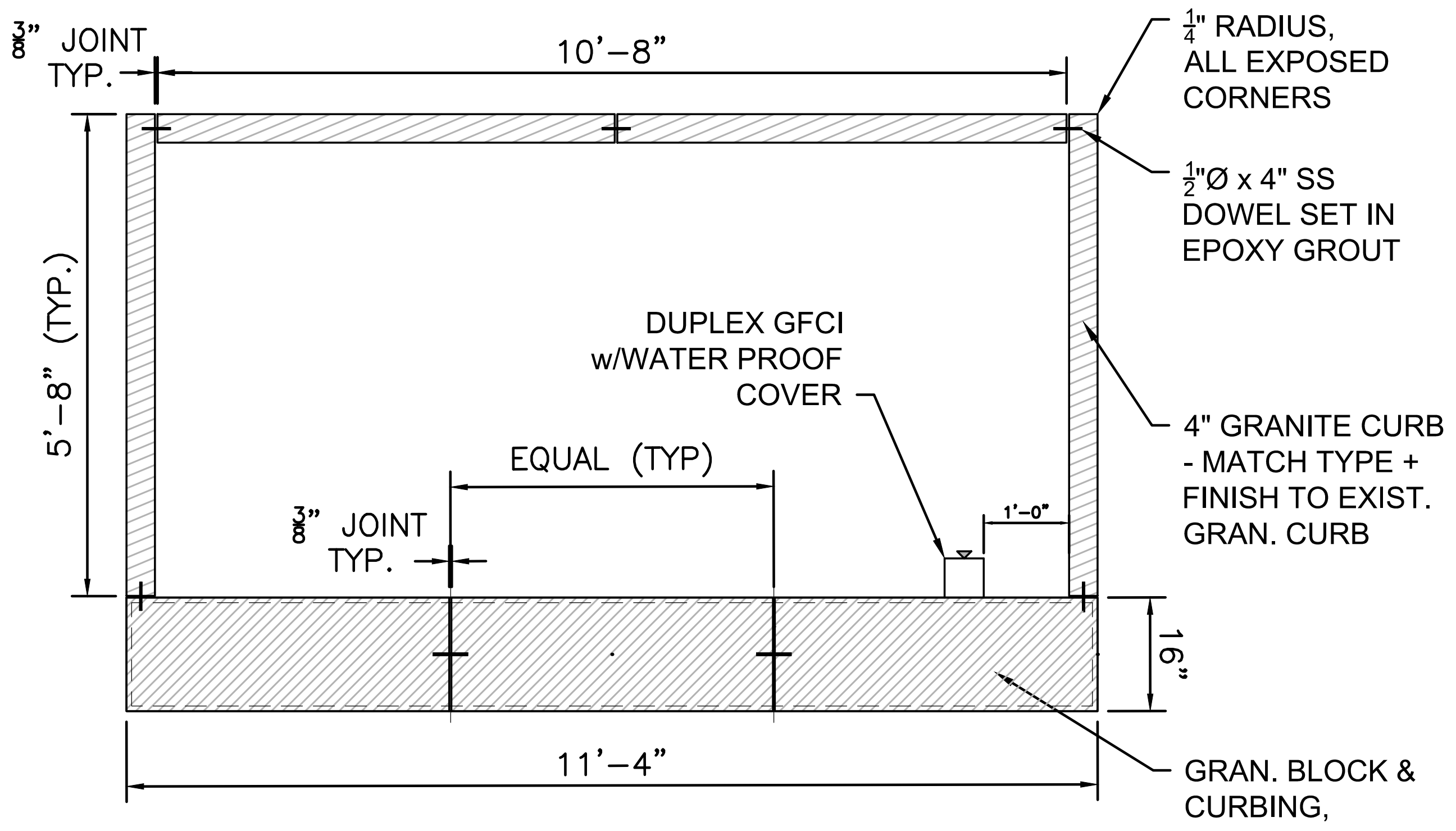
BENCH LAYOUT

BENCH PLANTER - E

SCALE: 1/2"=1'-0"


WOOD SEAT (4' SECTIONS TYP)
SKATE DETERRENT (TYP.) ONE PER SEAT SECTION (CENTERED)

BENCH LAYOUT


3/8" JOINT TYP.
10'–8"
1/4" RADIUS, ALL EXPOSED CORNERS
1/2"Ø x 4" SS DOWEL SET IN EPOXY GROUT
5'–8" (TYP.)
DUPLEX GFCI w/WATER PROOF COVER
EQUAL (TYP)
3/8" JOINT TYP.
1'–0"
4" GRANITE CURB - MATCH TYPE + FINISH TO EXIST. GRAN. CURB
16"
11'–4"
GRAN. BLOCK & CURBING, THERMAL FINISH ALL EXPOSED FACES

GRANITE LAYOUT

BENCH PLANTER - G

SCALE: 1/2"=1'-0"

NUMBER	DATE	MADE BY	CHECKED BY	REVISIONS

DRAWN BY: XX
DESIGNED BY: XX
CHECKED BY: XX

REGISTERED PROFESSIONAL
KIEN Y. HO
CIVIL ENGINEER
No. 46431
2/8/21

PREPARED BY
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LEXINGTON, MASSACHUSETTS

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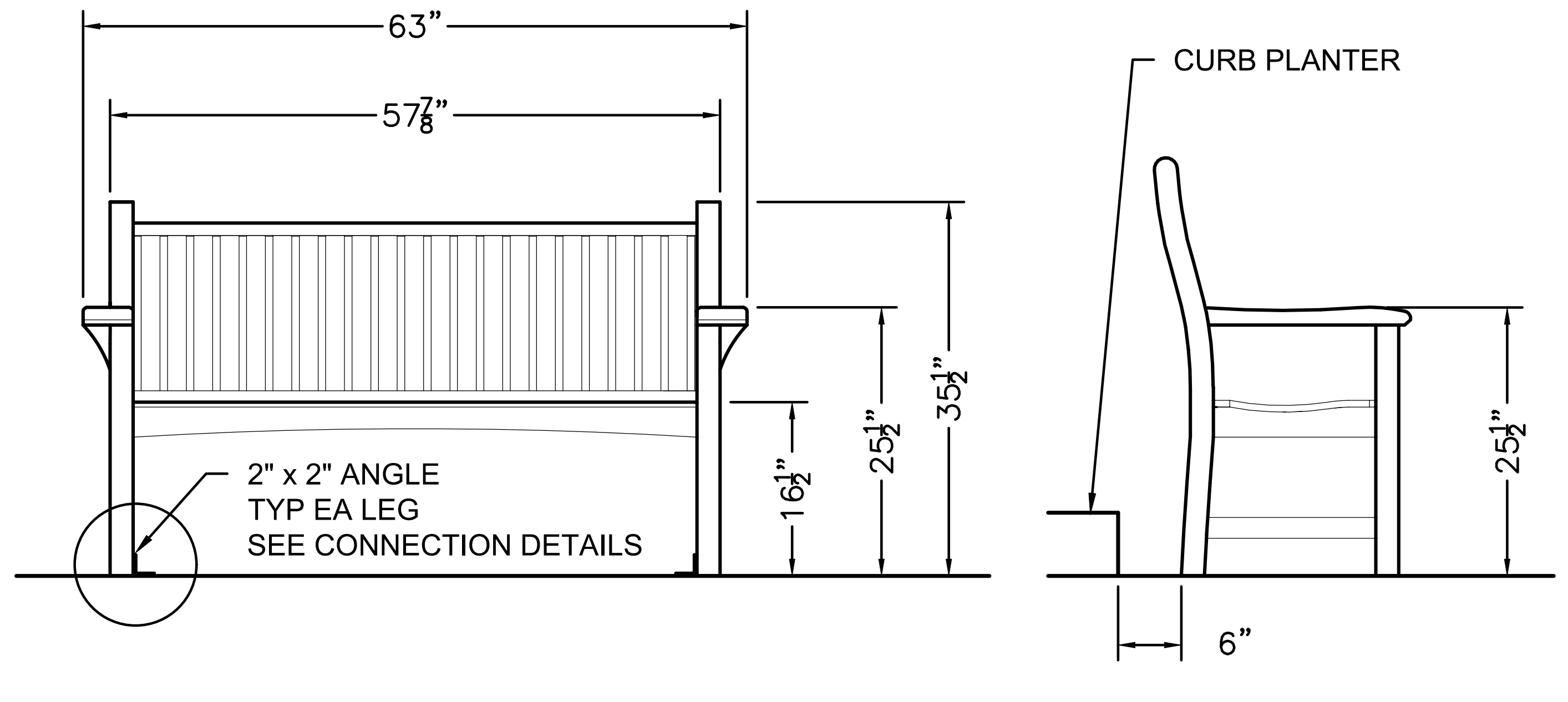
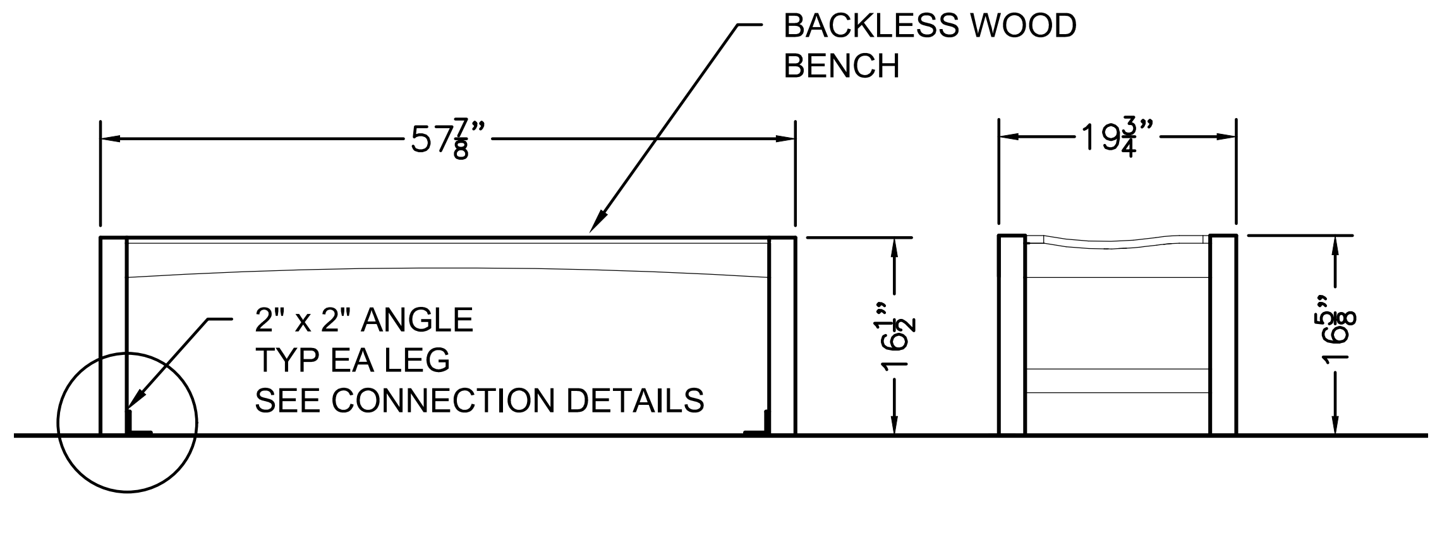


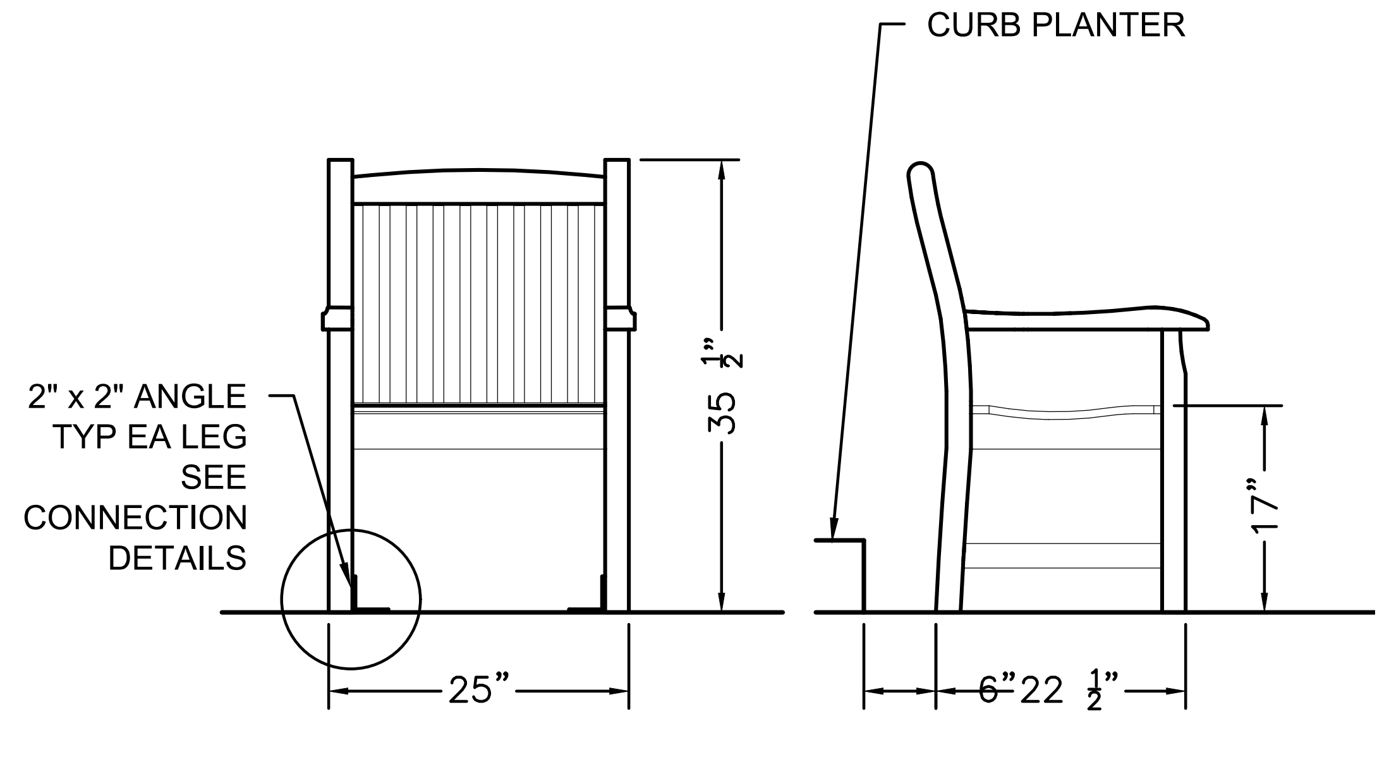
WOOD BENCH (NEW OR RESET) TYPE B-1

SCALE: $\frac{3}{4}$" = 1'-0"



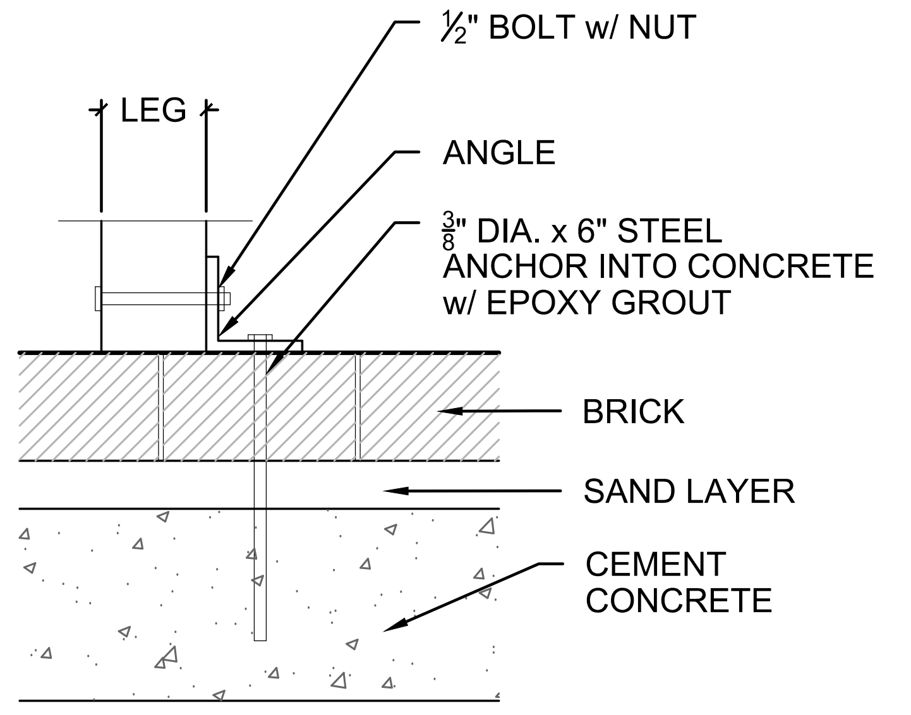
WOOD BENCH TYPE B-2

SCALE: $\frac{3}{4}$" = 1'-0"



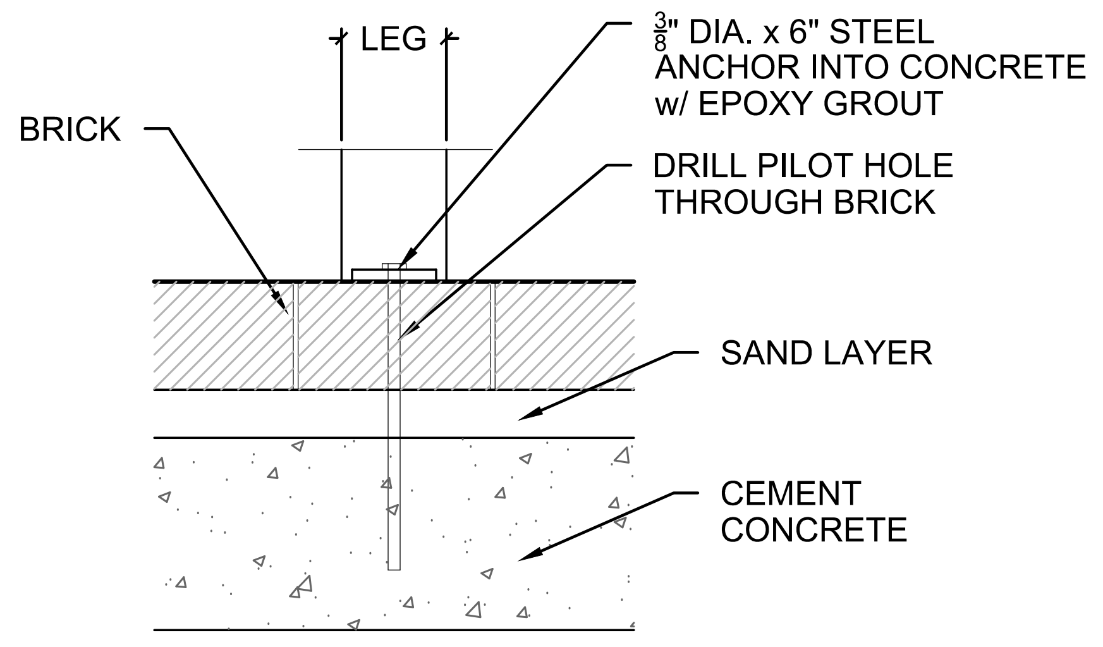
WOOD CHAIR

SCALE: $\frac{3}{4}$" = 1'-0"



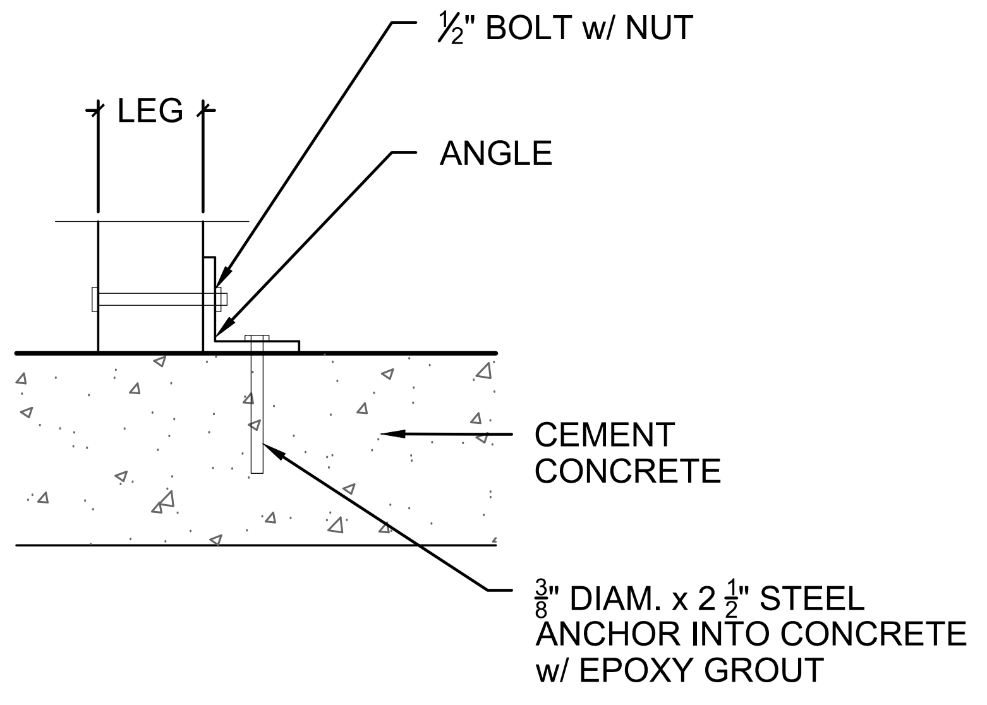
WOOD BENCH / CHAIR CONNECTION DETAIL

3"=1'-0"



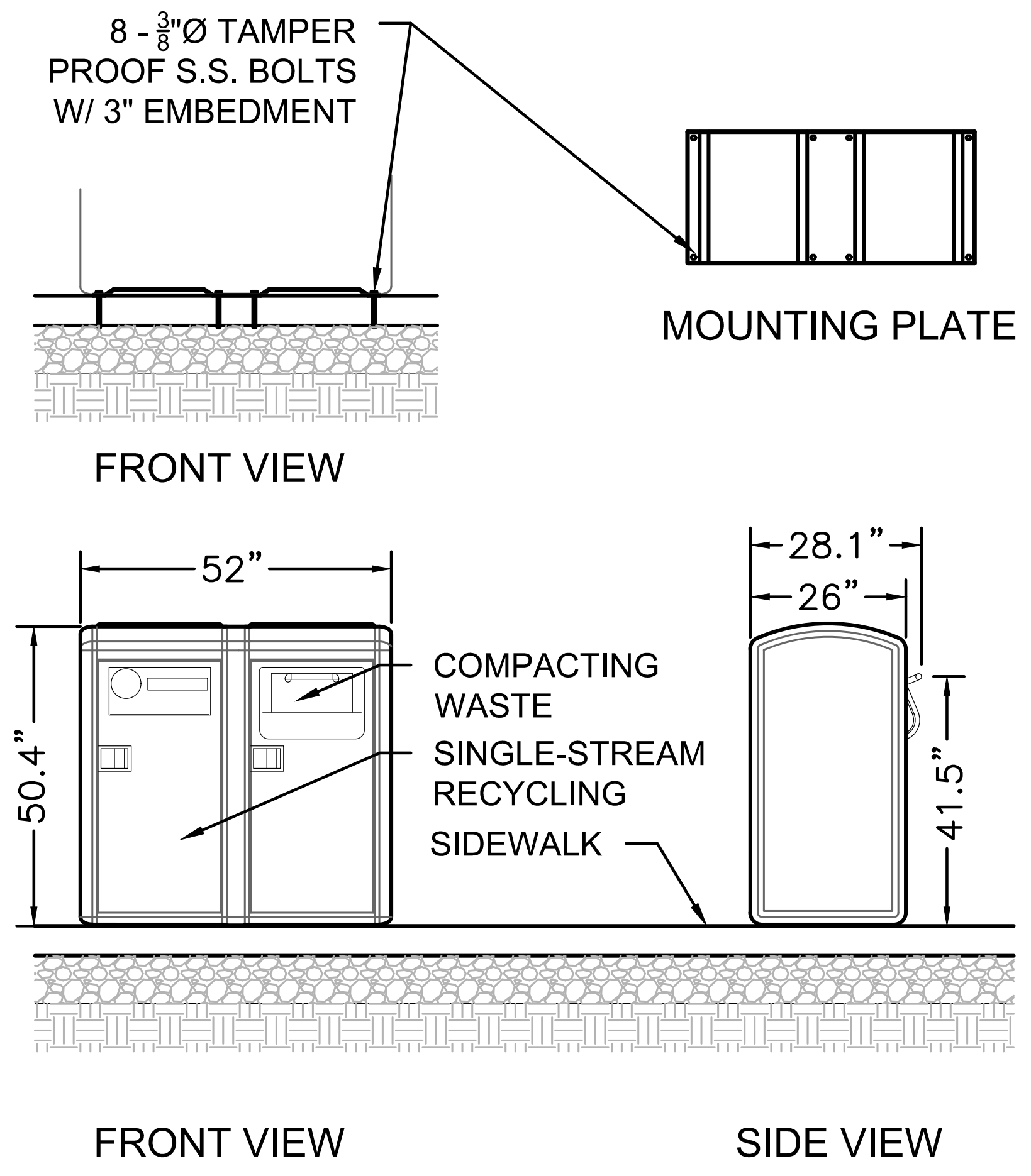
SITE FURNITURE CONNECTION DETAIL

3"=1'-0"


$\frac{1}{2}$" BOLT w/ NUT
LEG
ANGLE
CEMENT
CONCRETE
$\frac{3}{8}$" DIAM. x $2\frac{1}{2}$" STEEL
ANCHOR INTO CONCRETE
w/ EPOXY GROUT

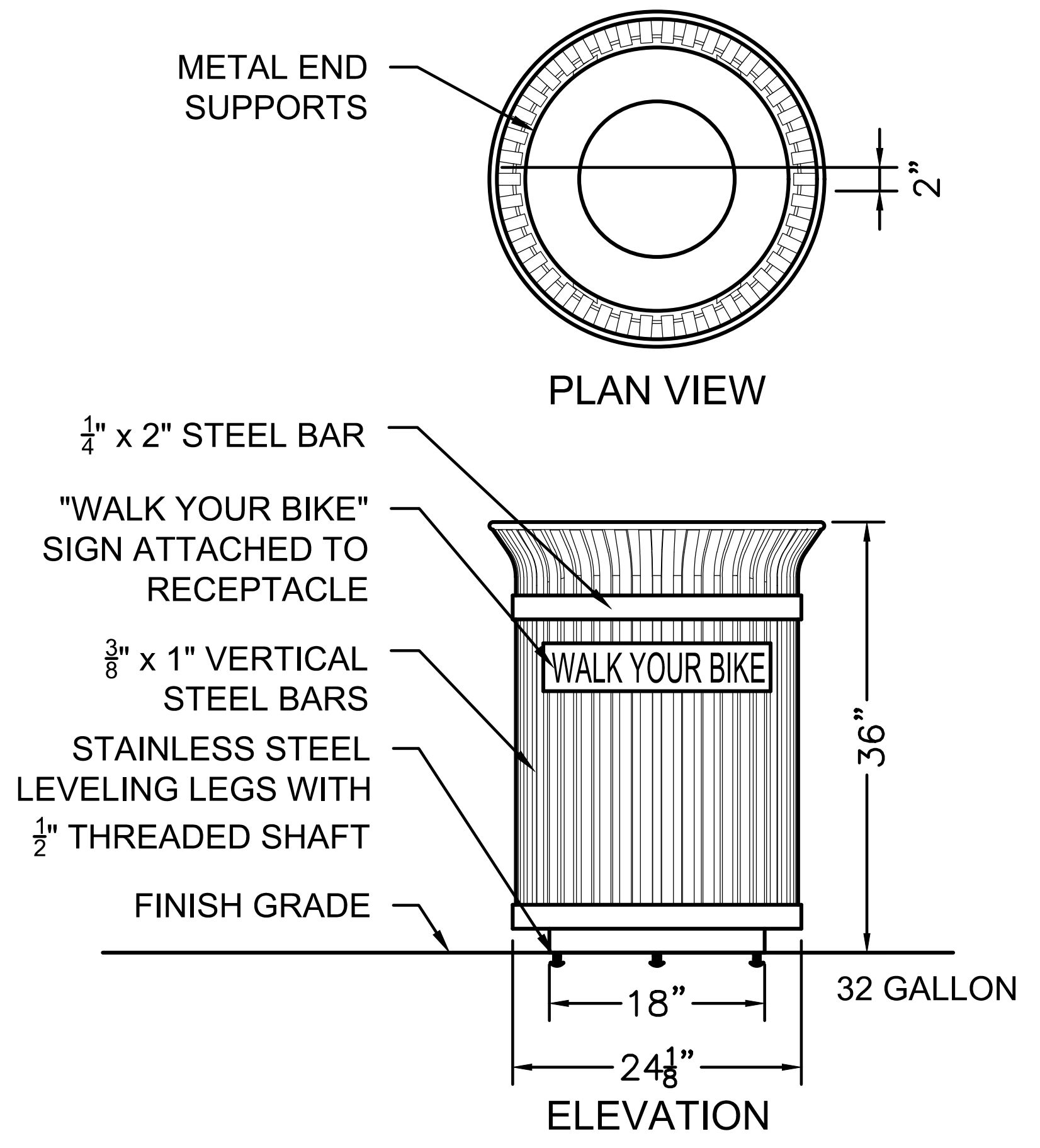
WOOD BENCH CONNECTION DETAIL IN CONCRETE

SCALE: 3"=1'-0"



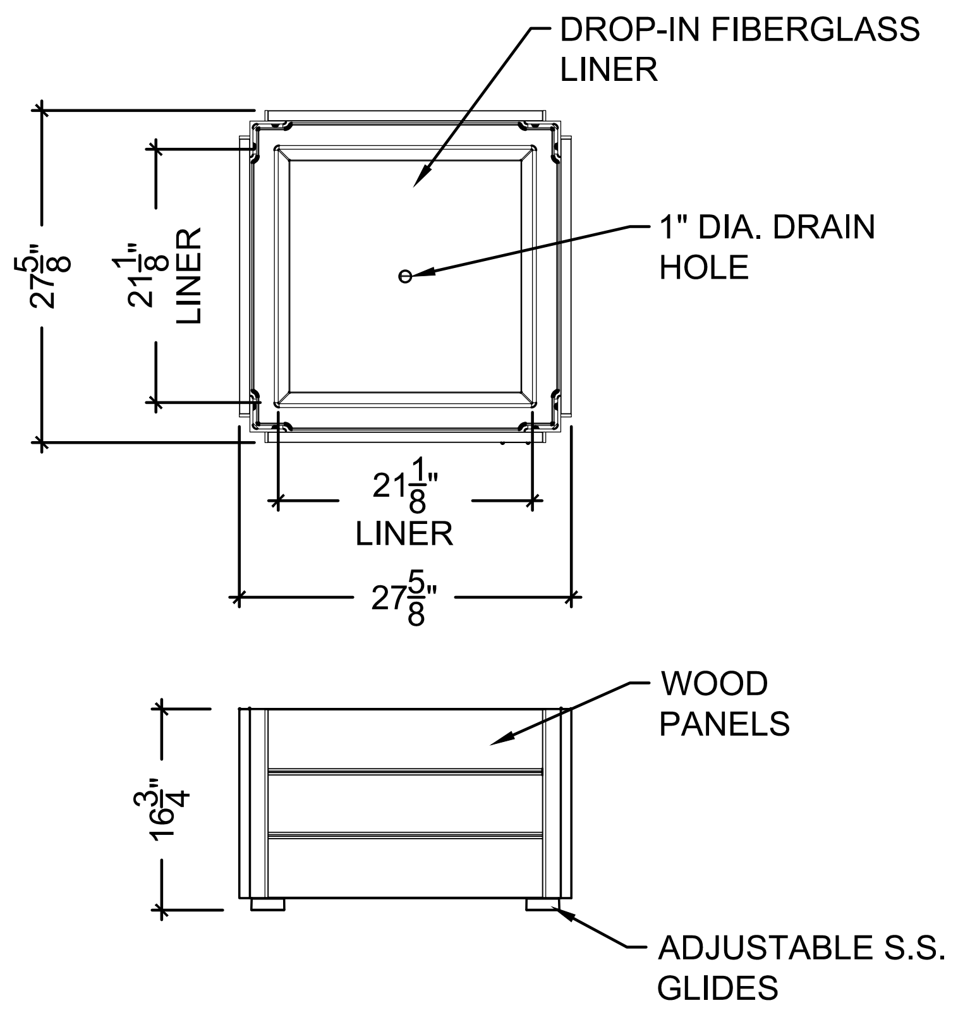
SOLOR POWERED WASTE & RECYCLING SYSTEM

SCALE: $\frac{3}{8}$"=1'-0"



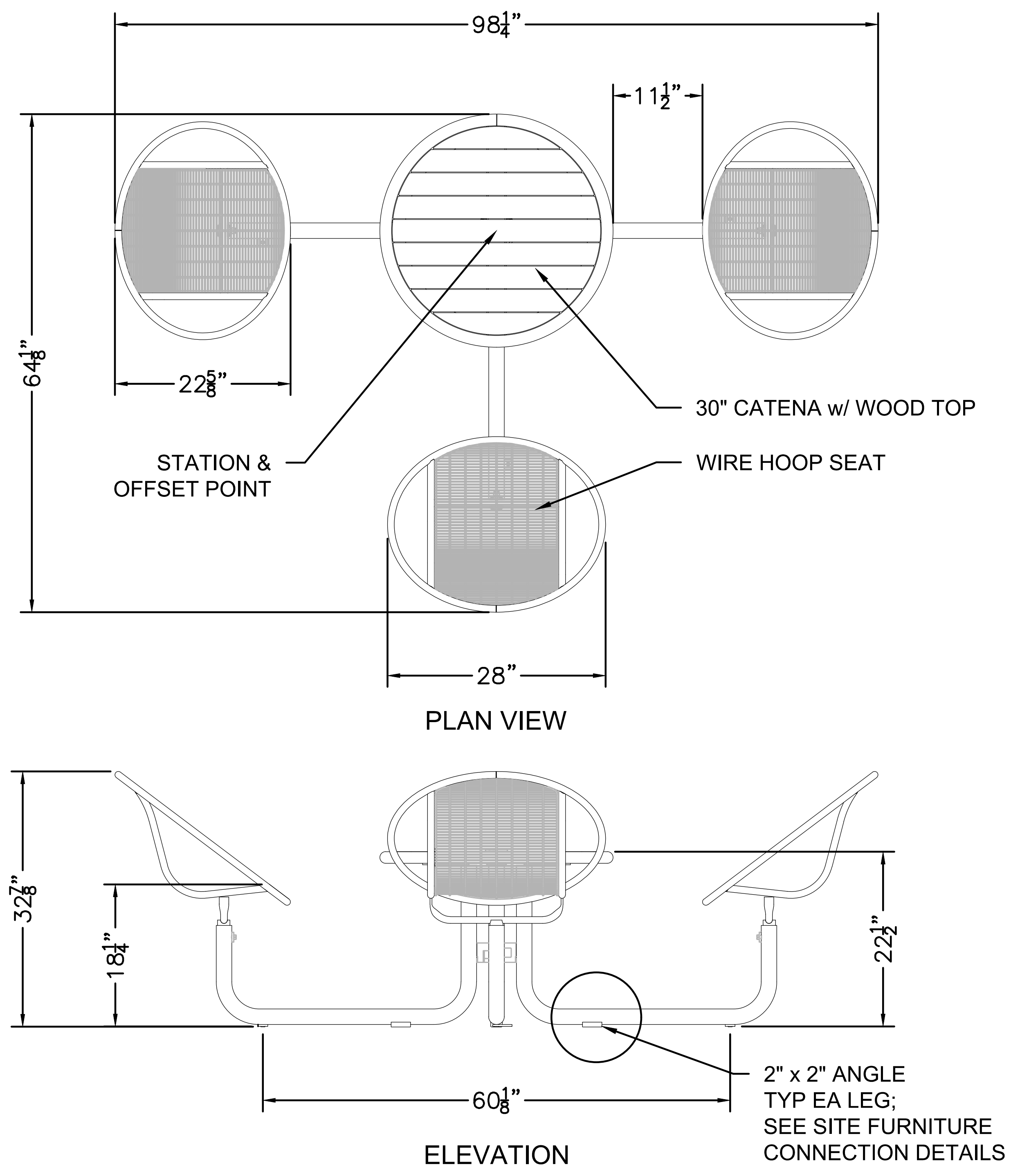
TRASH RECEPTACLE

SCALE: $\frac{3}{4}$" = 1'-0"



WOOD PLANTER

SCALE: $\frac{3}{4}$"=1' - 0"



CAROUSEL TABLE & SEATS

$\frac{3}{4}$" = 1'-0"

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NUMBER	DATE	MADE BY	CHECKED BY	REVISIONS

DRAWN BY: AP

DESIGNED BY: KC

CHECKED BY: DJ

REGISTERED PROFESSIONAL

KIEN Y. HO
CIVIL ENGINEER
No. 46[illegible]31

Kieny Ho
2/8/21

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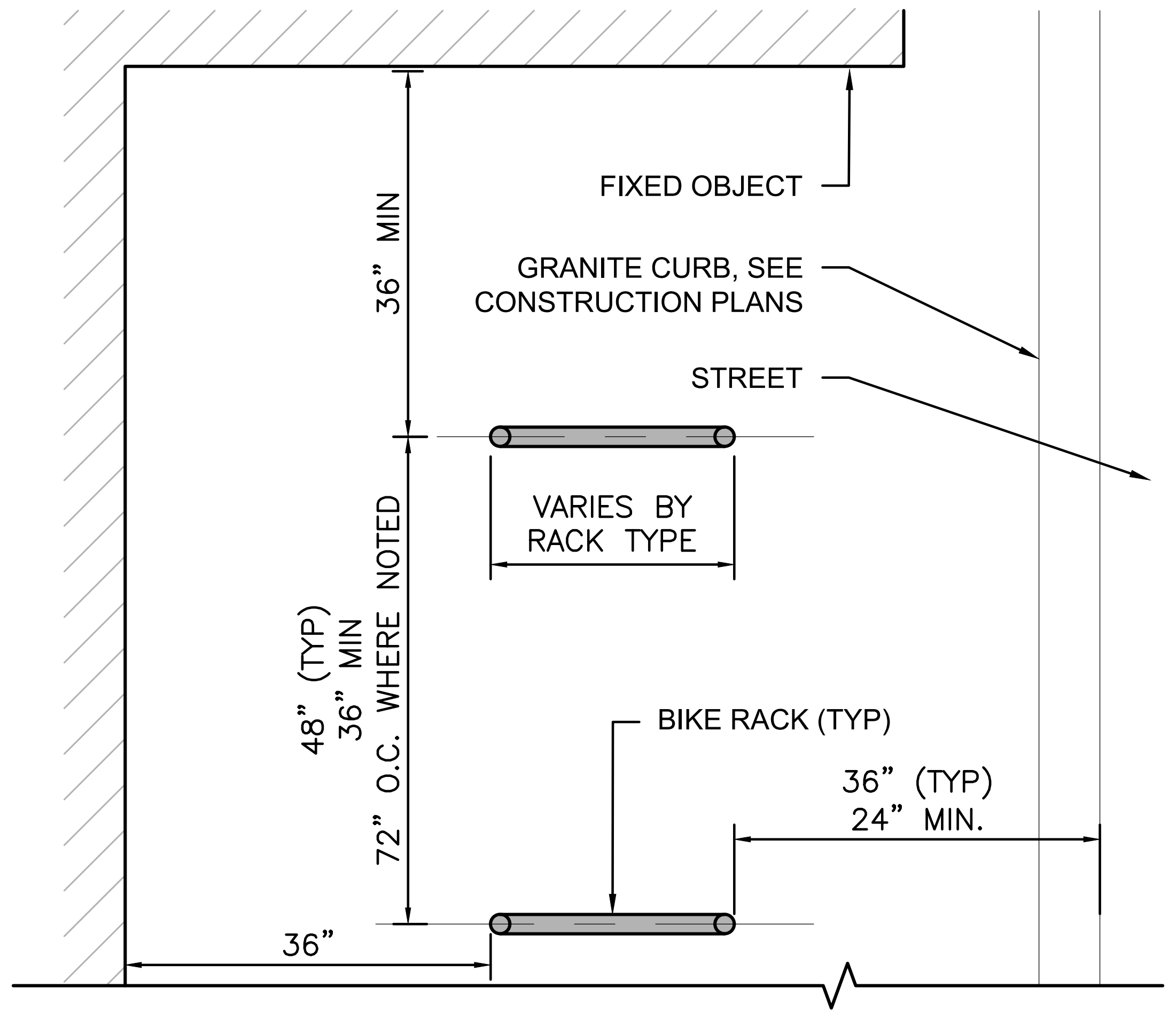
TOWN CENTER IMPROVEMENTS
SITE FURNISHINGS
LEXINGTON, MASSACHUSETTS

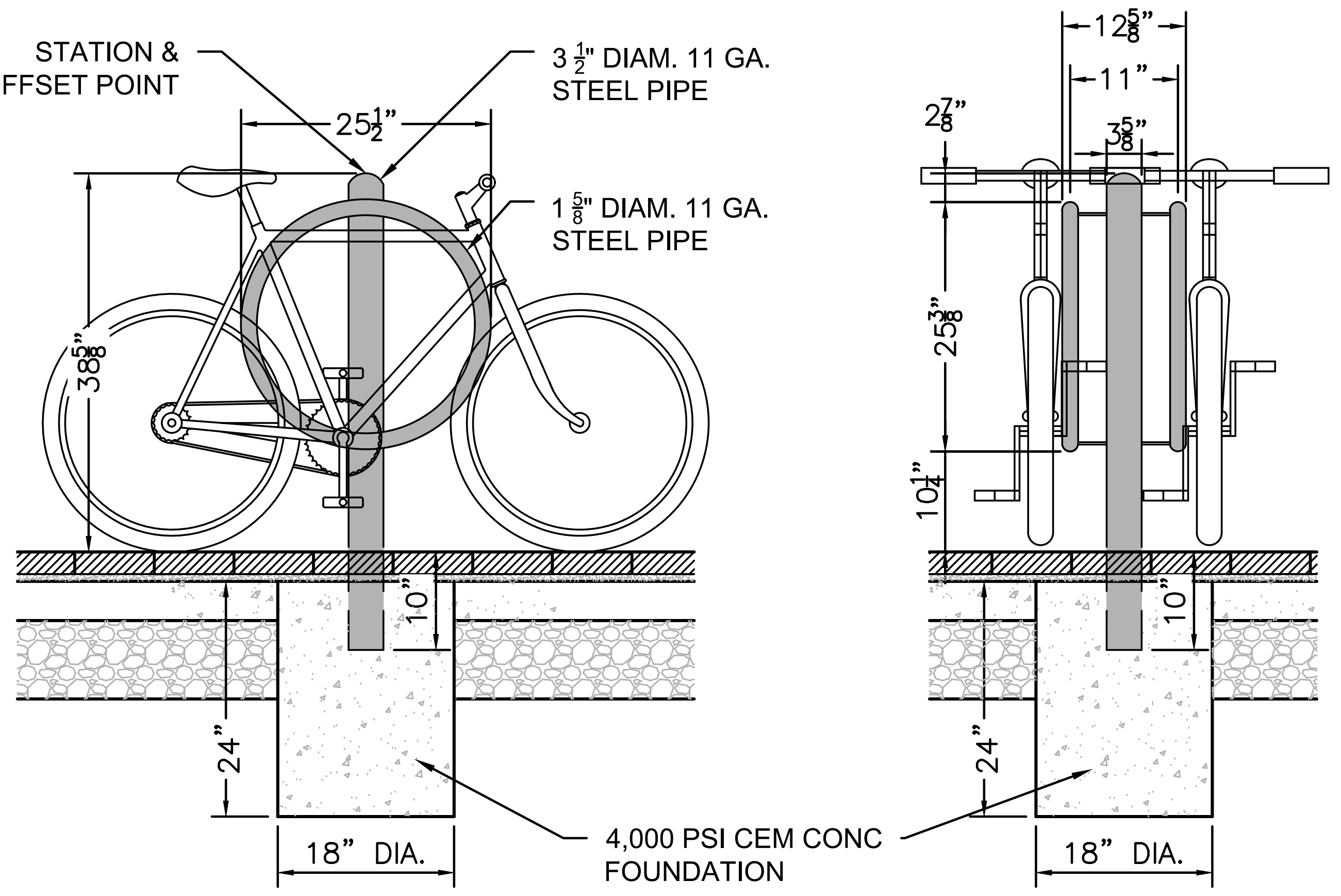
BETA JOB NO. 6331
ISSUE DATE 02/05/2021
SHEET NO. 62 OF 92



PLAN VIEW

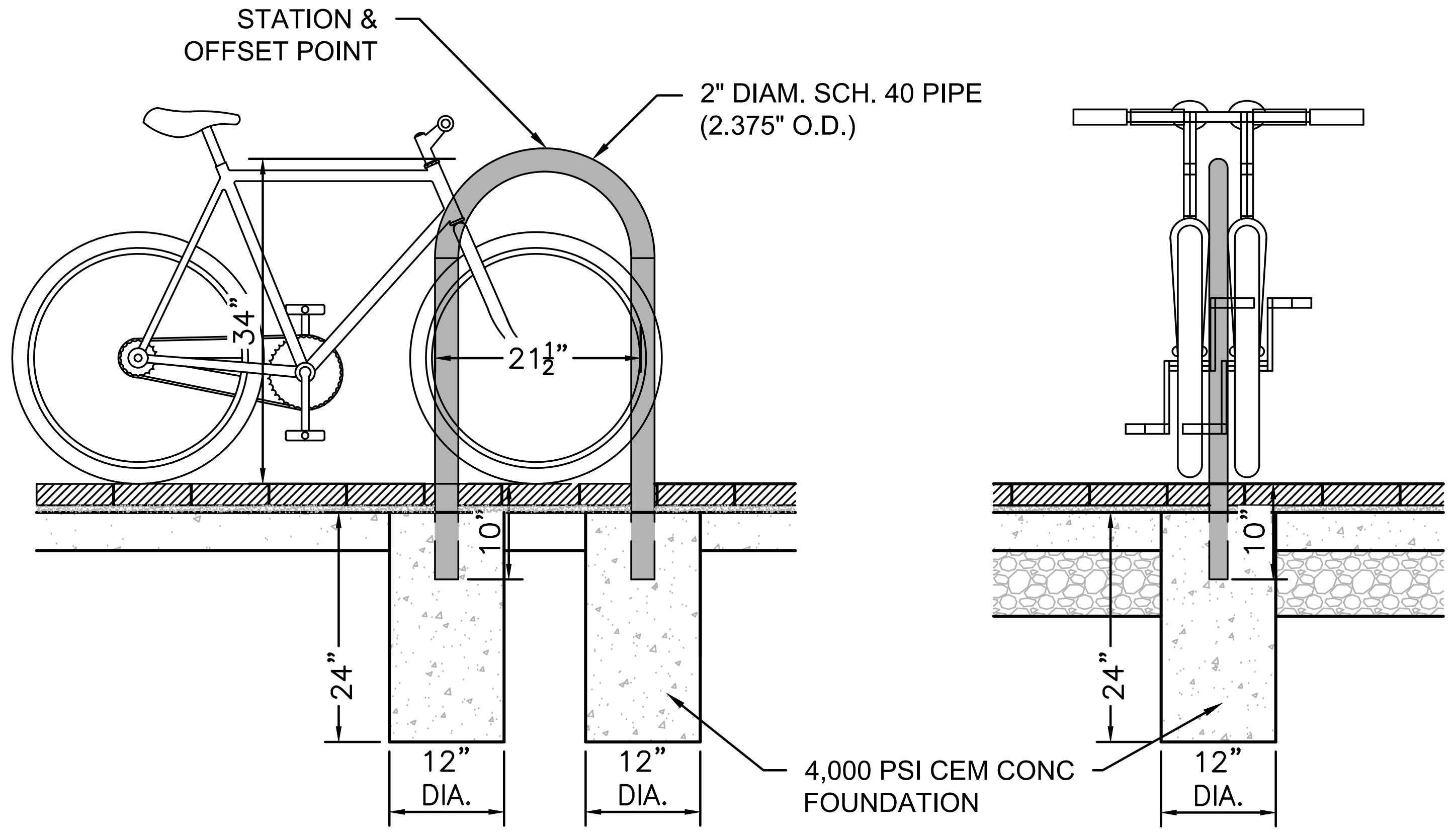
BIKE RACK LAYOUT

SCALE: 3/4" = 1'-0"



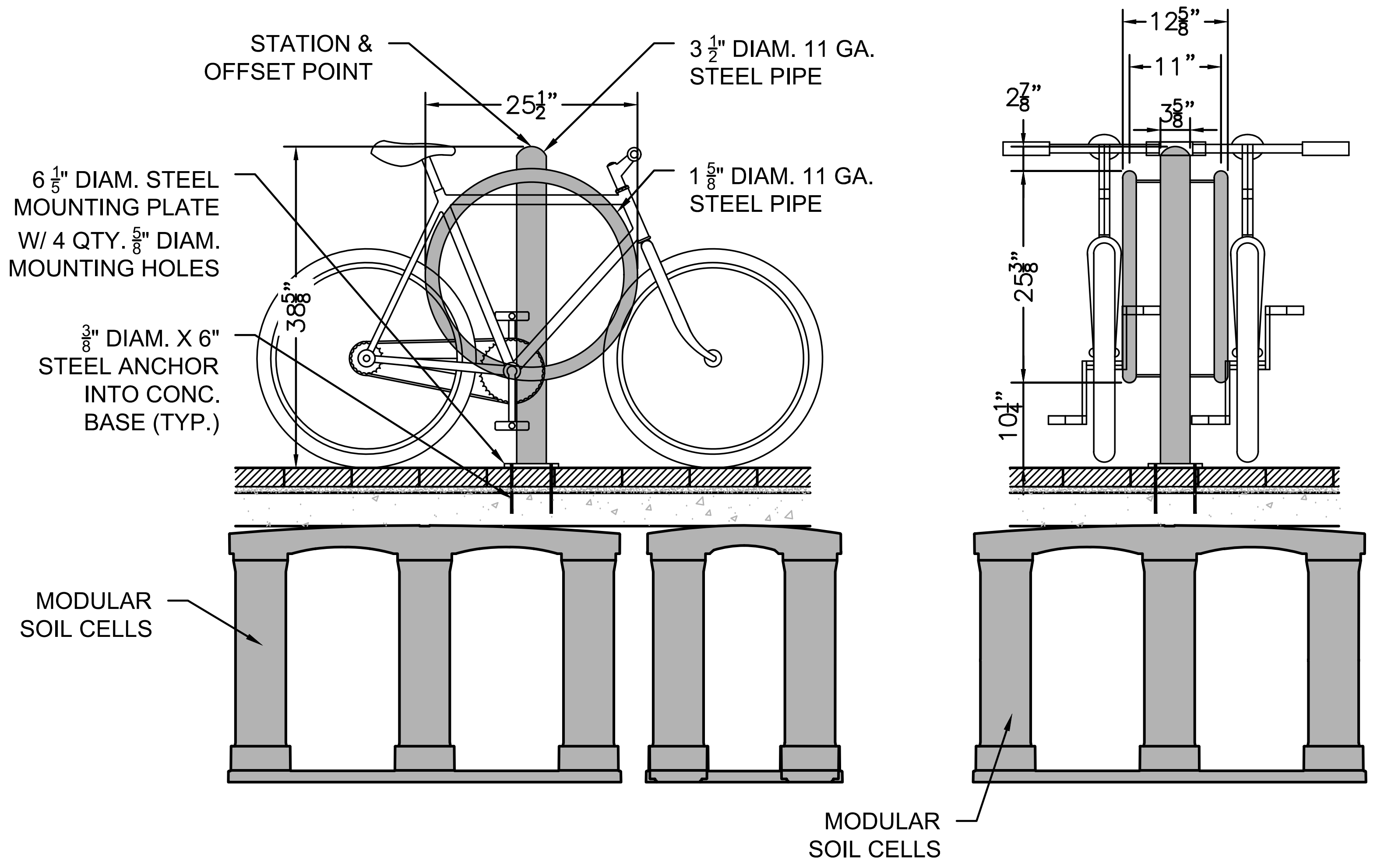
BIKE RACK - TYPE A - IN GROUND MOUNT

SCALE: 3/4" = 1'-0"



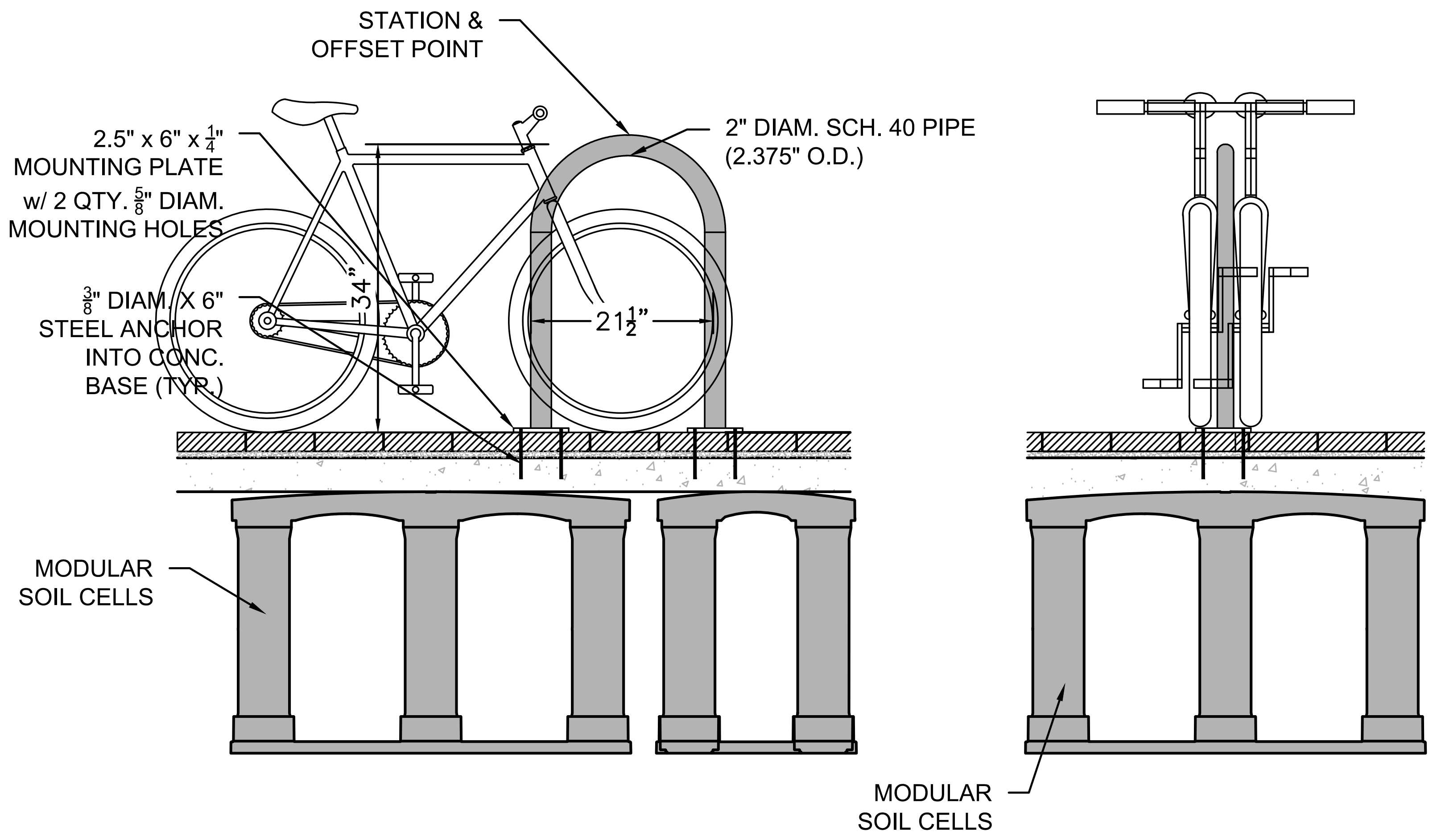
BIKE RACK - TYPE B - IN GROUND MOUNT

SCALE: 3/4" = 1'-0"


STATION & OFFSET POINT
3 1/2" DIAM. 11 GA. STEEL PIPE
1 5/8" DIAM. 11 GA. STEEL PIPE
6 1/5" DIAM. STEEL MOUNTING PLATE W/ 4 QTY. 5/8" DIAM. MOUNTING HOLES
3/8" DIAM. X 6" STEEL ANCHOR INTO CONC. BASE (TYP.)
25 1/2"
38 5/8"
MODULAR SOIL CELLS
12 5/8"
11"
2 7/8"
3 5/8"
25 3/8"
10 1/4"
MODULAR SOIL CELLS

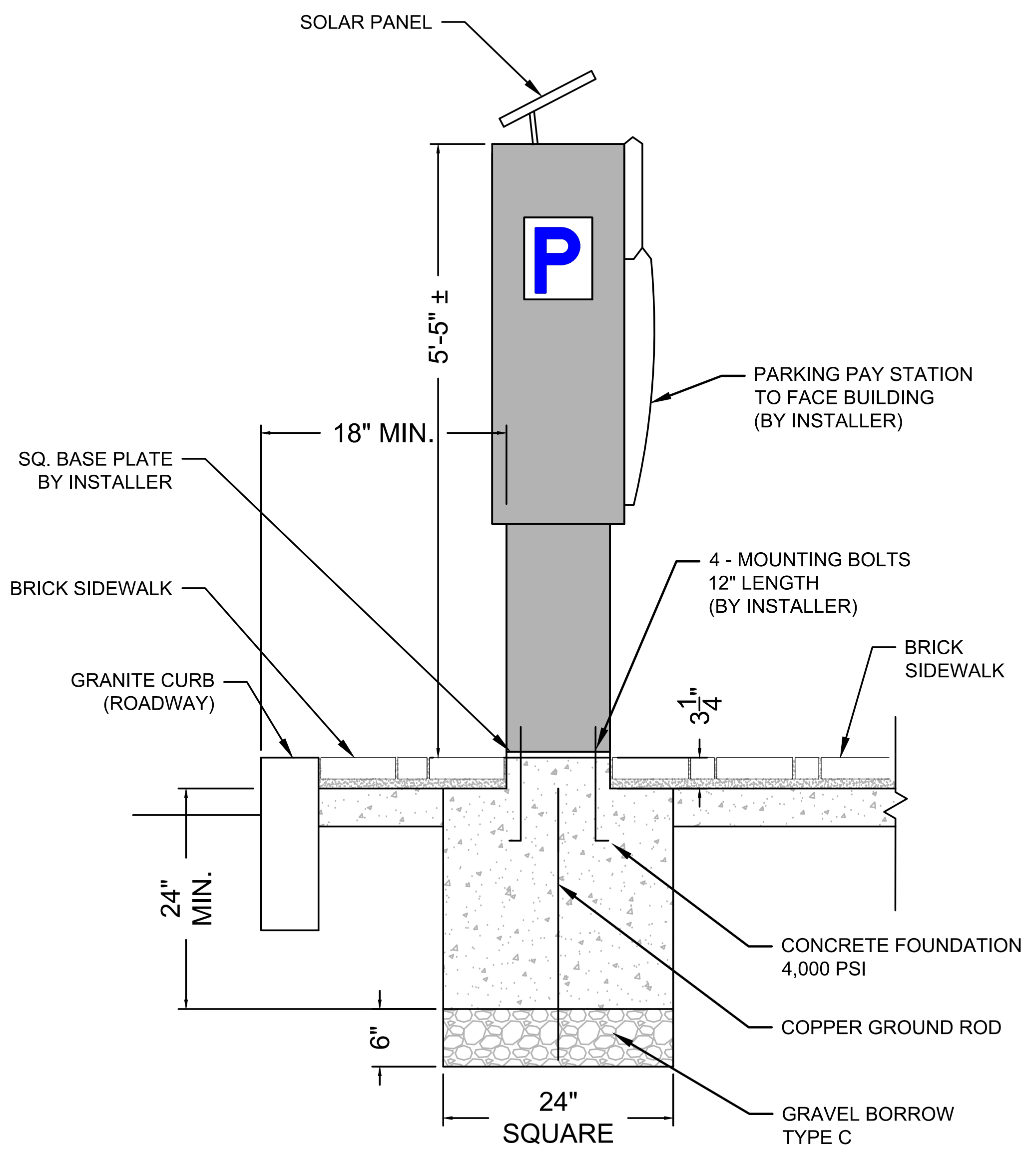
BIKE RACK - TYPE A - SURFACE MOUNT

SCALE: 3/4" = 1'-0"


STATION & OFFSET POINT
2" DIAM. SCH. 40 PIPE (2.375" O.D.)
2.5" x 6" x 1/4" MOUNTING PLATE w/ 2 QTY. 5/8" DIAM. MOUNTING HOLES
3/8" DIAM. X 6" STEEL ANCHOR INTO CONC. BASE (TYP.)
34"
21 1/2"
MODULAR SOIL CELLS
MODULAR SOIL CELLS

BIKE RACK - TYPE B - SURFACE MOUNT

SCALE: 3/4" = 1'-0"


SOLAR PANEL
P
5'-5" ±
PARKING PAY STATION TO FACE BUILDING (BY INSTALLER)
18" MIN.
SQ. BASE PLATE BY INSTALLER
BRICK SIDEWALK
4 - MOUNTING BOLTS 12" LENGTH (BY INSTALLER)
BRICK SIDEWALK
GRANITE CURB (ROADWAY)
3 1/4"
24" MIN.
CONCRETE FOUNDATION 4,000 PSI
COPPER GROUND ROD
6"
24" SQUARE
GRAVEL BORROW TYPE C

SIDE ELEVATION

PARKING PAY STATION - ADD ALTERNATE

SCALE: 3/4" = 1'-0"

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NUMBER	DATE	MADE BY	CHECKED BY	REVISIONS

DRAWN BY: AP
DESIGNED BY: KC
CHECKED BY: DJ

REGISTERED PROFESSIONAL
KIEN Y. HO
CIVIL ENGINEER
Kien Ho
2/8/21

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TOWN CENTER IMPROVEMENTS
SITE FURNISHINGS
LEXINGTON, MASSACHUSETTS

BETA JOB NO. 6331
ISSUE DATE 02/05/2021
SHEET NO. 63 OF 92

MASSACHUSETTS AVENUE
(ROUTES 4 & 225)
MERIAM STREET
DEPOT SQUARE
(ONE-WAY)
DEPOT SQUARE
(ONE-WAY)
CLARKE STREET
MUZZEY STREET
(ONE-WAY)
EMERY PARK
CARY MEMORIAL LIBRARY
N
10+00
11+00
12+00
13+00
14+00
16+00
40+00
41+00
41+90
50+00
51+00
52+00
53+00
60+00
61+00
1845
1841
1837
1833
1793
1787
1781
1810
1806
1800
1796
1794
1792
1788
1780
1842-1844
1838
1840
1822
LIMIT OF MODULAR SOIL CELLS (TYP.)
LIMIT OF SOIL TYPE - A (STRUCTURAL SOIL TYP)
LOAM & SEED DISTURBED AREAS
TREE PLANTER (TYP.)
SHRUB PLANTER (TYP.), SEE PLANTING PLAN ENLARGEMENTS
ZSG 2
GTS 4
ZSG 1
ZSG 1
ZSG 1
GTS 3
GTS 2
4" PERF PIPE
FRAME AND GRATE w/ 12" PCV PIPE (TYP)
4" PERF PIPE
TREE GRATE - TYPE A (5'x10') (TYP.)
RET GRATE & 12" PIPE
4" PERF PIPE
FRAME AND GRATE w/ 12" PCV PIPE (TYP)
LIMIT OF SOIL TYPE - A (STRUCTURAL SOIL TYP)
REM GRATE & 12" PIPE
BENCH PLANTER - A, SEE PLANTING PLAN ENLARGEMENTS
4" PERF PIPE
RET GRATE & 12" PIPE
FRAME AND GRATE w/ 12" PCV PIPE
SOIL TYPE -A (STRUCTURAL SOIL) AT EX. TREE PIT (TYP)
FRAME AND GRATE w/ 12" PCV PIPE
BENCH PLANTER - B, SEE PLANTING PLAN ENLARGEMENTS
LIMIT OF SOIL TYPE - A (STRUCTURAL SOIL TYP)
CONTINUED ON SHEET NO. 65

SOILS LEGEND

▨	SOIL MIX C AT MODULAR SOIL CELLS
░	SOIL MIX A STRUCTURAL SOIL

NOTES:
1. FOR TREE PLANTING DETAIL SECTIONS SEE PLANTING DETAIL SHEET.
2. FOR MODULAR SOIL CELL, STRUCTURAL SOIL, AND TREE GRATE DETAILS SEE DETAIL SHEET.

PLANT SCHEDULE - THIS SHEET

KEY	BOTANICAL NAME *COMMON NAME*	QTY.	SIZE	NOTES
TREES				
GTS	GLEDITSIA TRIACANTHOS INERMIS 'SKYCOLE' *HONEY LOCUST*	9	3.5"-4" CAL.	B&B
ZSG	ZELKOVA SERRATA 'GREEN VASE' *JAPANESE ZELKOVA*	5	3.5"-4" CAL.	B&B

NUMBER	DATE	MADE BY	CHECKED BY	REVISIONS

DRAWN BY: AP
DESIGNED BY: KC
CHECKED BY: DJ

REGISTERED PROFESSIONAL
KIEN Y. HO CIVIL ENGINEER No. 46731
Kien Ho
2/8/21

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TOWN CENTER IMPROVEMENTS
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LEXINGTON, MASSACHUSETTS

BETA JOB NO. 6331
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SHEET NO. 64 OF 92

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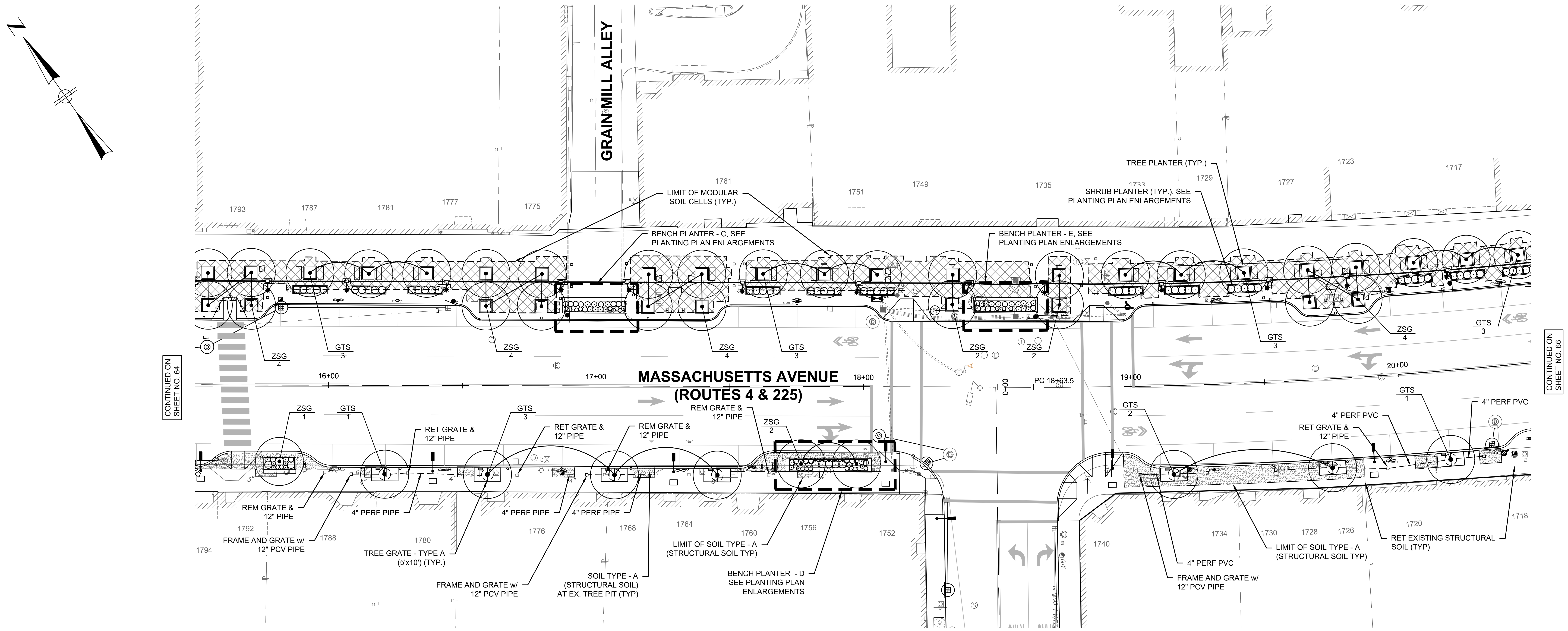
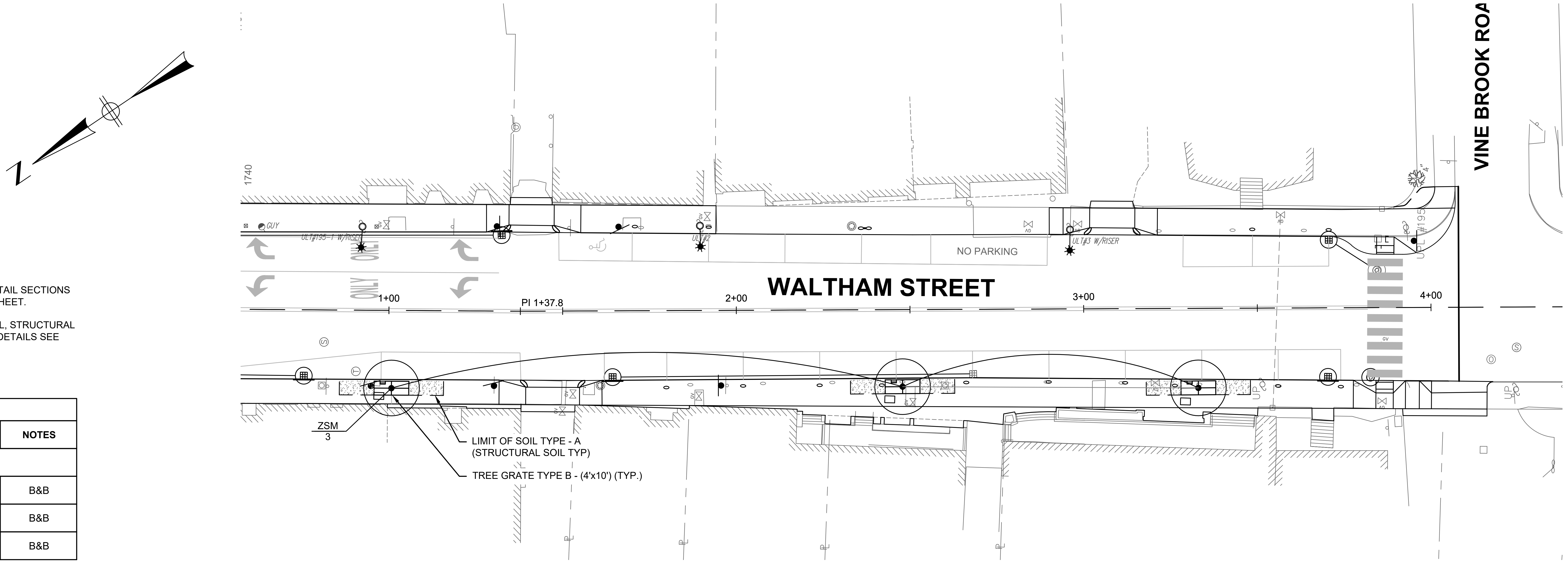

N
GRAIN MILL ALLEY
1793
1787
1781
1777
1775
1761
1751
1749
1735
1733
1729
1727
1723
1717
LIMIT OF MODULAR SOIL CELLS (TYP.)
BENCH PLANTER - C, SEE PLANTING PLAN ENLARGEMENTS
BENCH PLANTER - E, SEE PLANTING PLAN ENLARGEMENTS
TREE PLANTER (TYP.)
SHRUB PLANTER (TYP.), SEE PLANTING PLAN ENLARGEMENTS
CONTINUED ON SHEET NO. 64
CONTINUED ON SHEET NO. 66
ZSG 4
GTS 3
ZSG 4
ZSG 4
GTS 3
ZSG 2
ZSG 2
GTS 3
ZSG 4
GTS 3
16+00
17+00
MASSACHUSETTS AVENUE
(ROUTES 4 & 225)
18+00
0+00
PC 18+63.5
19+00
20+00
ZSG 1
GTS 1
GTS 3
RET GRATE & 12" PIPE
RET GRATE & 12" PIPE
REM GRATE & 12" PIPE
REM GRATE & 12" PIPE
ZSG 2
GTS 2
GTS 1
4" PERF PVC
RET GRATE & 12" PIPE
4" PERF PVC
REM GRATE & 12" PIPE
4" PERF PIPE
4" PERF PIPE
4" PERF PIPE
1792
1794
1788
1780
1776
1768
1764
1760
1756
1752
1740
1734
1730
1728
1726
1720
1718
FRAME AND GRATE w/ 12" PCV PIPE
TREE GRATE - TYPE A (5'x10') (TYP.)
FRAME AND GRATE w/ 12" PCV PIPE
SOIL TYPE - A (STRUCTURAL SOIL) AT EX. TREE PIT (TYP)
LIMIT OF SOIL TYPE - A (STRUCTURAL SOIL TYP)
BENCH PLANTER - D SEE PLANTING PLAN ENLARGEMENTS
4" PERF PVC
FRAME AND GRATE w/ 12" PCV PIPE
LIMIT OF SOIL TYPE - A (STRUCTURAL SOIL TYP)
RET EXISTING STRUCTURAL SOIL (TYP)


N
1740
VINE BROOK ROA
NO PARKING
WALTHAM STREET
1+00
PI 1+37.8
2+00
3+00
4+00
ZSM 3
LIMIT OF SOIL TYPE - A (STRUCTURAL SOIL TYP)
TREE GRATE TYPE B - (4'x10') (TYP.)

SOILS LEGEND

▨	SOIL MIX C AT MODULAR SOIL CELLS
░	SOIL MIX A STRUCTURAL SOIL

NOTES:

1. FOR TREE PLANTING DETAIL SECTIONS SEE PLANTING DETAIL SHEET.
2. FOR MODULAR SOIL CELL, STRUCTURAL SOIL, AND TREE GRATE DETAILS SEE DETAIL SHEET.

PLANT SCHEDULE - THIS SHEET

KEY	BOTANICAL NAME *COMMON NAME*	QTY.	SIZE	NOTES
TREES				
GTS	GLEDITSIA TRIACANTHOS INERMIS 'SKYCOLE' *HONEY LOCUST*	16	3.5"-4" CAL.	B&B
ZSG	ZELKOVA SERRATA 'GREEN VASE' *JAPANESE ZELKOVA*	23	3.5"-4" CAL.	B&B
ZSM	ZELKOVA SERRATA 'MUSASHINO' *SLENDER JAPANESE ZELKOVA*	3	3.5"-4" CAL.	B&B

NUMBER	DATE	MADE BY	CHECKED BY	REVISIONS

DRAWN BY: AP

DESIGNED BY: KC

CHECKED BY: DJ

REGISTERED PROFESSIONAL

KIEN Y. HO
CIVIL ENGINEER
No. 46431
Kien Y Ho
2/8/21

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PLANTING PLAN
LEXINGTON, MASSACHUSETTS

BETA JOB NO. 6331
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CONTINUED ON SHEET NO. 65

N
EDISON WAY (ONE-WAY)
GRANT STREET
MASSACHUSETTS AVENUE (ROUTES 4 & 225)
WALLIS COURT
LEXINGTON TOWN HALL
4 GRANT ST
TREE PLANTER (TYP.)
LIMIT OF MODULAR SOIL CELL (TYP)
SHRUB PLANTER (TYP.), SEE PLANTING PLAN ENLARGEMENTS
SEE PLANTING PLAN ENLARGEMENTS - EDISON WAY
LIMIT OF SOIL TYPE - A (STRUCTURAL SOIL TYP)
ZSG 4
GTS 1
TREE GRATE - TYPE B (4'X10') (TYP)
ZSG 4
CBE 4
CBE 4
TREE GRATE - TYPE A (5'X10') (TYP)
GTS 5
ZSG 1
AC 1
AC 1
RET EXIST AERATION DRAIN
4" PERF. CORR. PIPE (TYP)
FRAME AND GRATE w/ 12" PCV PIPE (TYP)
LIMIT OF SOIL TYPE - A (STRUCTURAL SOIL TYP)
TREE GRATE - TYPE A (5'x10') (TYP.)
LIMIT OF SOIL TYPE - A (STRUCTURAL SOIL TYP)
BENCH PLANTER - F, SEE PLANTING PLAN ENLARGEMENTS
SEE PLANTING PLAN ENLARGEMENTS - WALLIS COURT
20+00
21+00
22+00
23+00
24+00
25+00
70+00
71+00
80+00
81+00
90+00
90+75
100+00
100+75
PT 23+39.2
PC 23+86.8
1727
1723
1717
1713
1709
1728
1726
1720
1718
1710
1690
1688
1684
1666
1666
1661
1656
1646
1632

CONTINUED ON SHEET NO. 67

SOILS LEGEND

▨	SOIL MIX C AT MODULAR SOIL CELLS
▒	SOIL MIX A STRUCTURAL SOIL

NOTES:
1. FOR TREE PLANTING DETAIL SECTIONS SEE PLANTING DETAIL SHEET.
2. FOR MODULAR SOIL CELL, STRUCTURAL SOIL, AND TREE GRATE DETAILS SEE DETAIL SHEET.

PLANT SCHEDULE - THIS SHEET

KEY	BOTANICAL NAME COMMON NAME	QTY.	SIZE	NOTES
TREES				
AC	AMELANCHIER CANADENSIS SERVICEBERRY	2	3.5"-4" CAL.	B&B
CBE	CARPINUS BETULUS 'EMERALD AVENUE' EMERALD AVENUE HORNBEAM	8	3.5"-4" CAL.	B&B
GTS	GLEDITSIA TRIACANTHOS INERMIS 'SKYCOLE' HONEY LOCUST	6	3.5"-4" CAL.	B&B
ZSG	ZELKOVA SERRATA 'GREEN VASE' JAPANESE ZELKOVA	9	3.5"-4" CAL.	B&B

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REGISTERED PROFESSIONAL
KIEN Y. HO
CIVIL ENGINEER
No. [illegible]
Kieny Ho
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SOILS LEGEND

▨	SOIL MIX C AT MODULAR SOIL CELLS
▒	SOIL MIX A STRUCTURAL SOIL

NOTES:

1. FOR TREE PLANTING DETAIL SECTIONS SEE PLANTING DETAIL SHEET.
2. FOR MODULAR SOIL CELL, STRUCTURAL SOIL, AND TREE GRATE DETAILS SEE DETAIL SHEETS.

PLANT SCHEDULE - THIS SHEET

KEY	BOTANICAL NAME *COMMON NAME*	QTY.	SIZE	NOTES
TREES				
GTS	GLEDITSIA TRIACANTHOS INERMIS 'SKYCOLE' *HONEY LOCUST*	1	3.5"-4" CAL.	B&B
LT	LIRIODENDRON TULIPIFERA 'EMERALD CITY' *EMERALD CITY TULIP TREE*	5	3.5"-4" CAL.	B&B

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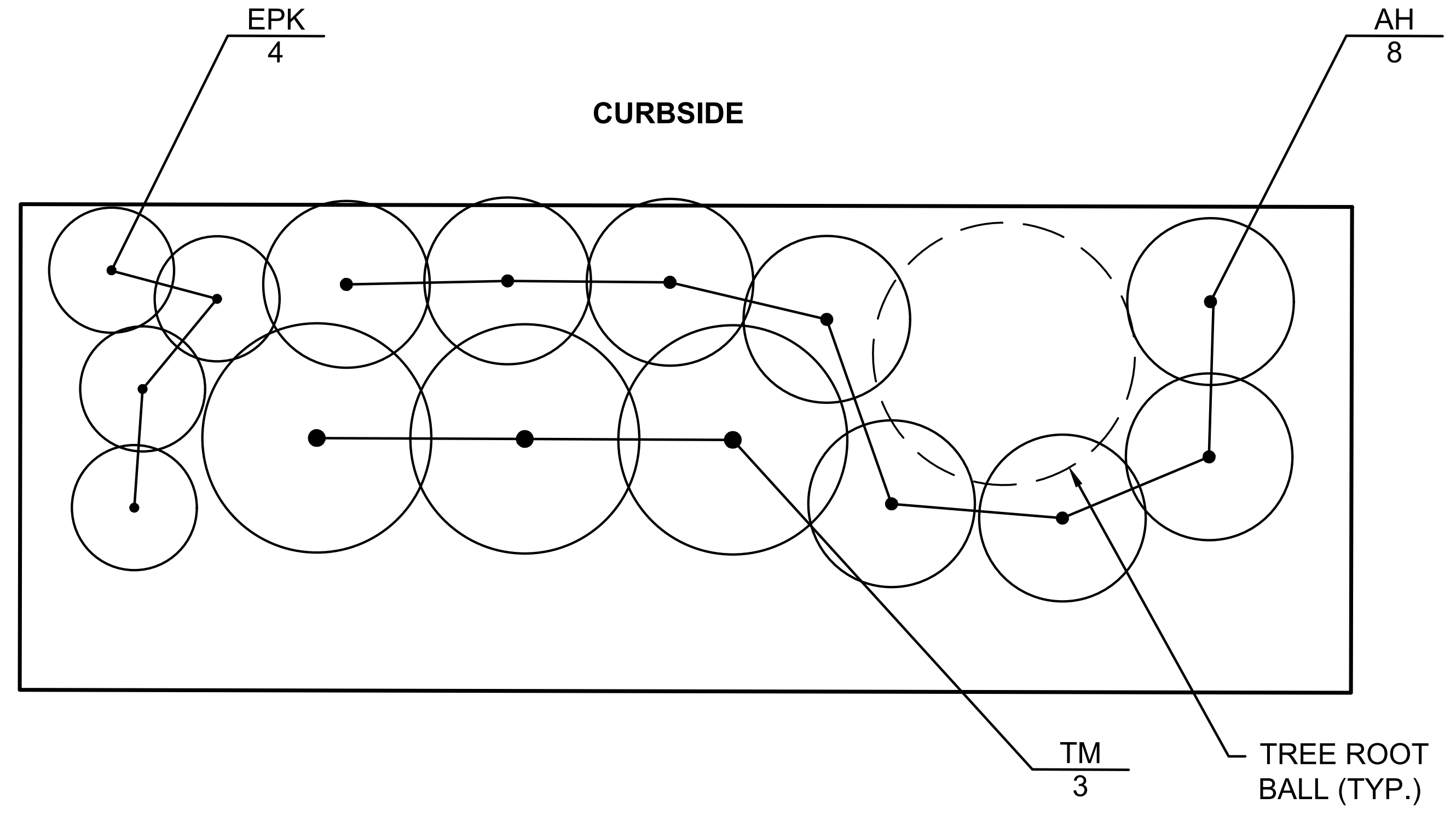
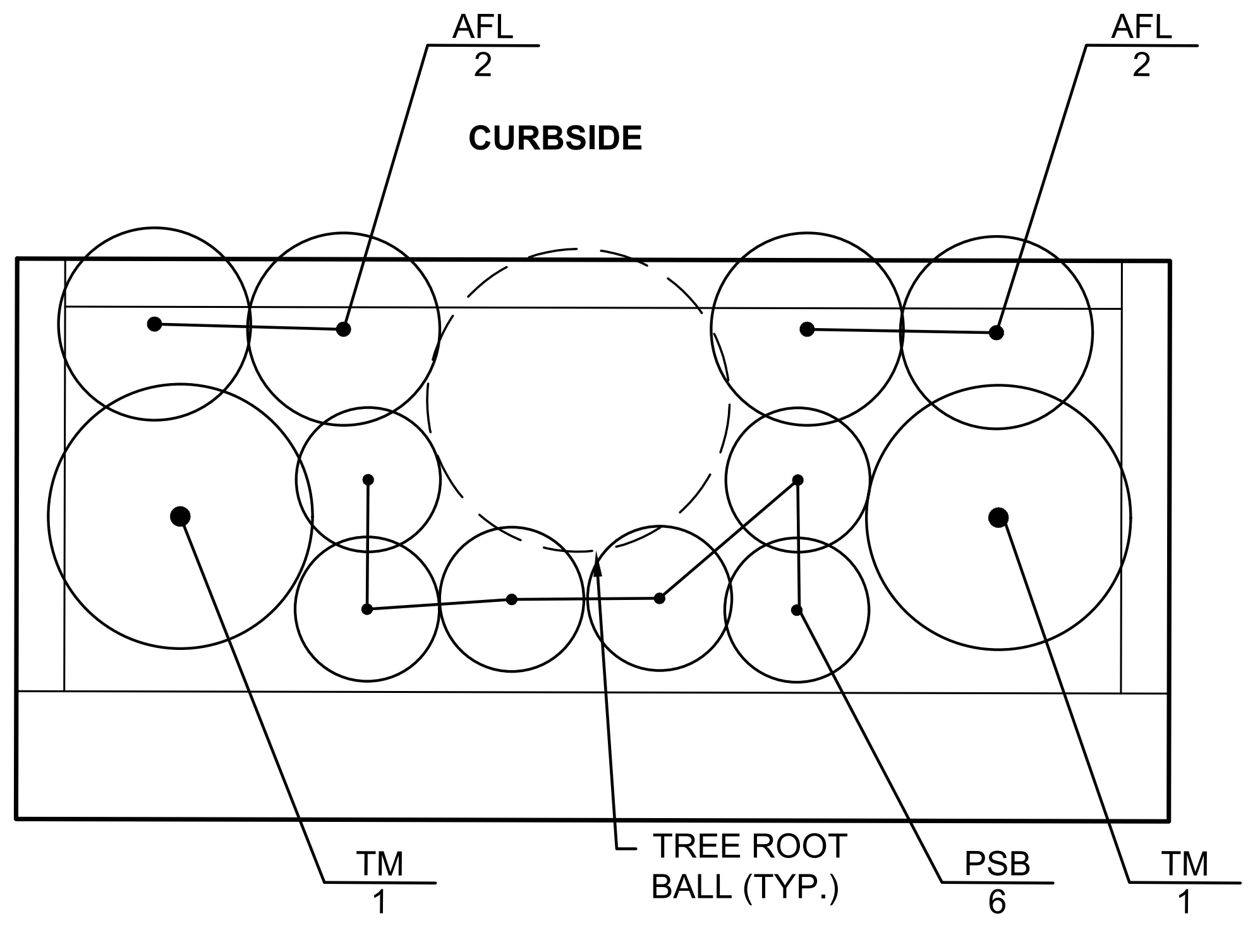


BENCH PLANTER - A

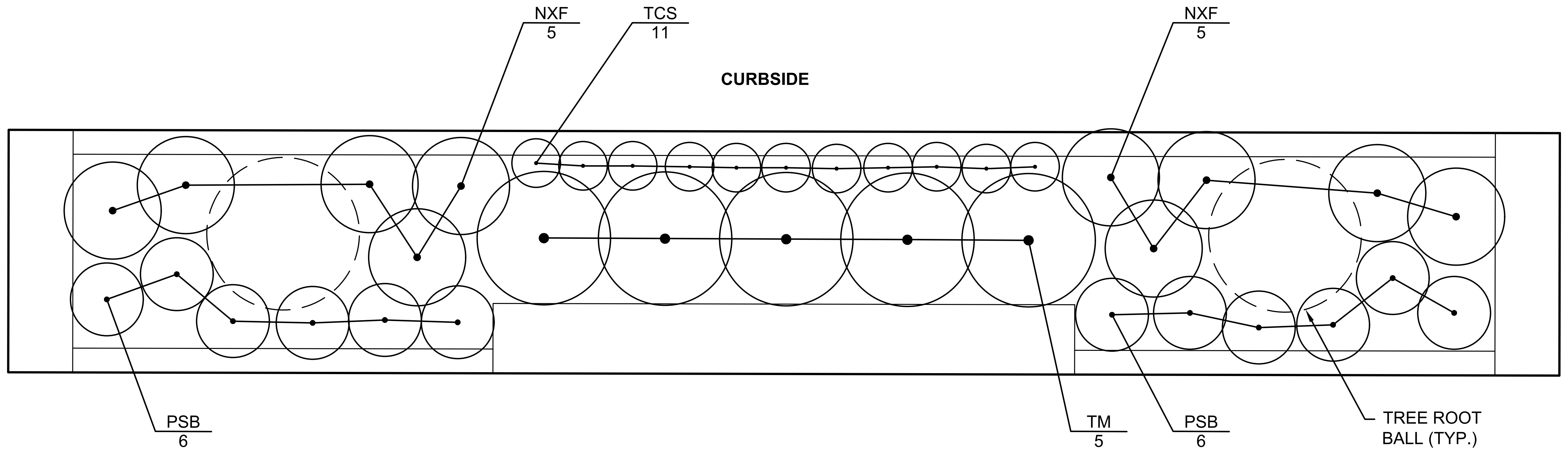
SCALE: ½" = 1'-0"

PLANT SCHEDULE - PLANTERS				
KEY	BOTANICAL NAME *COMMON NAME*	QTY.	SIZE	NOTES
SHRUBS				
JCG	JUNIPERUS COMMUNIS 'GOLD CONE' *GOLD CONE JUNIPER*	10	#5 CONT.	30" O.C.
TM	TAXUS MEDIA 'HICKSII' *HICKS ENGLISH YEW*	10	3'-3.5' B&B	30" O.C.
GRASSES & FERNS				
AFL	ATHYRIUM FILIX-FEMINA 'LADY IN RED' *LADY FERN*	4	#1 CONT.	24" O.C.
CAK	CALAMAGROSTIS 'KARL FOERSTER' *FOERSTER'S FEATHER REED GRASS*	14	#2 CONT.	24" O.C.
PVS	PANICUM VIRGATUM 'SHENANDOAH' *RED SWITCHGRASS*	5	#2 CONT.	24" O.C.
PERENNIALS				
AH	AMSONIA HUBRICHTII *ARKANSAS BLUESTAR*	14	#2 CONT.	24" O.C.
EPK	ECHINACEA PUPUREA 'KIM'S KNEE HIGH' *PURPLE CONEFLOWER*	20	#2 CONT.	18" O.C.
NXF	NEPETA X FAASSENII 'JUNIOR WALKER' *JUNIOR WALKER CATMINT*	10	#1 CONT.	24" O.C.
PSB	PHLOX STOLONIFERA 'BRUCE'S WHITE' *BRUCE'S WHITE CREEPING PHLOX*	18	#1 CONT.	18" O.C.
TCS	TIARELLA CORDIFOLIA 'SUGAR AND SPICE' *FOAMFLOWER*	11	#1 CONT.	12" O.C.



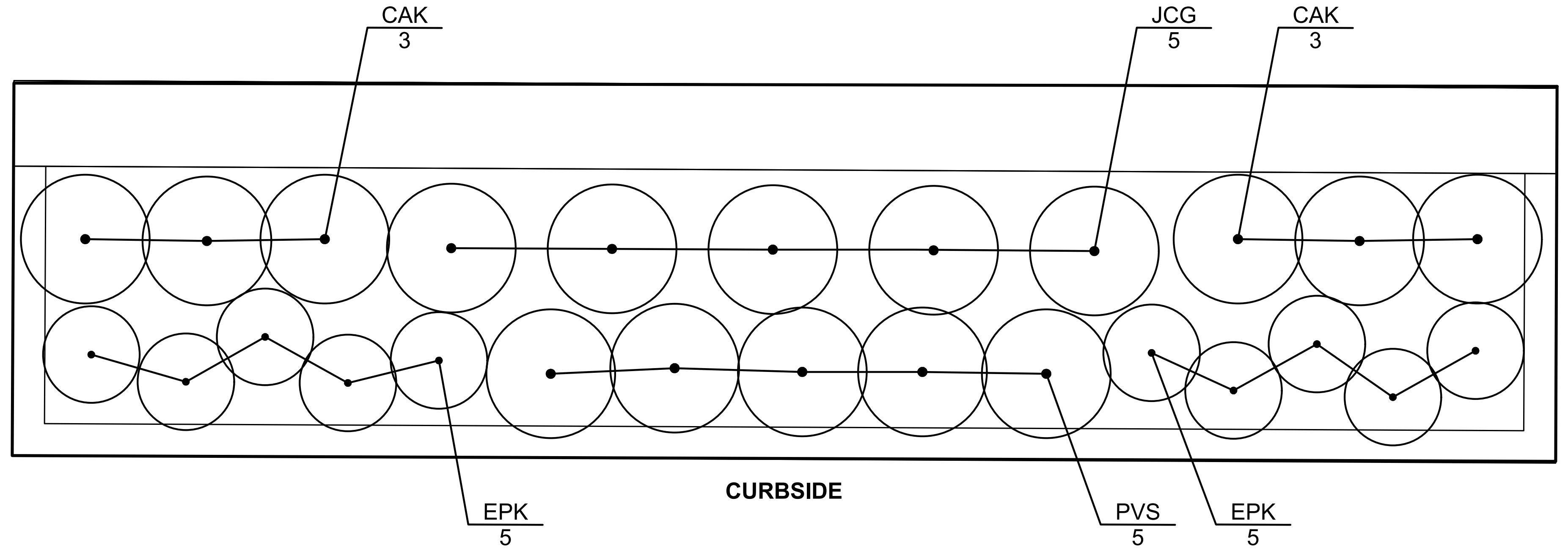
BENCH PLANTER - B

SCALE: ½" = 1'-0"



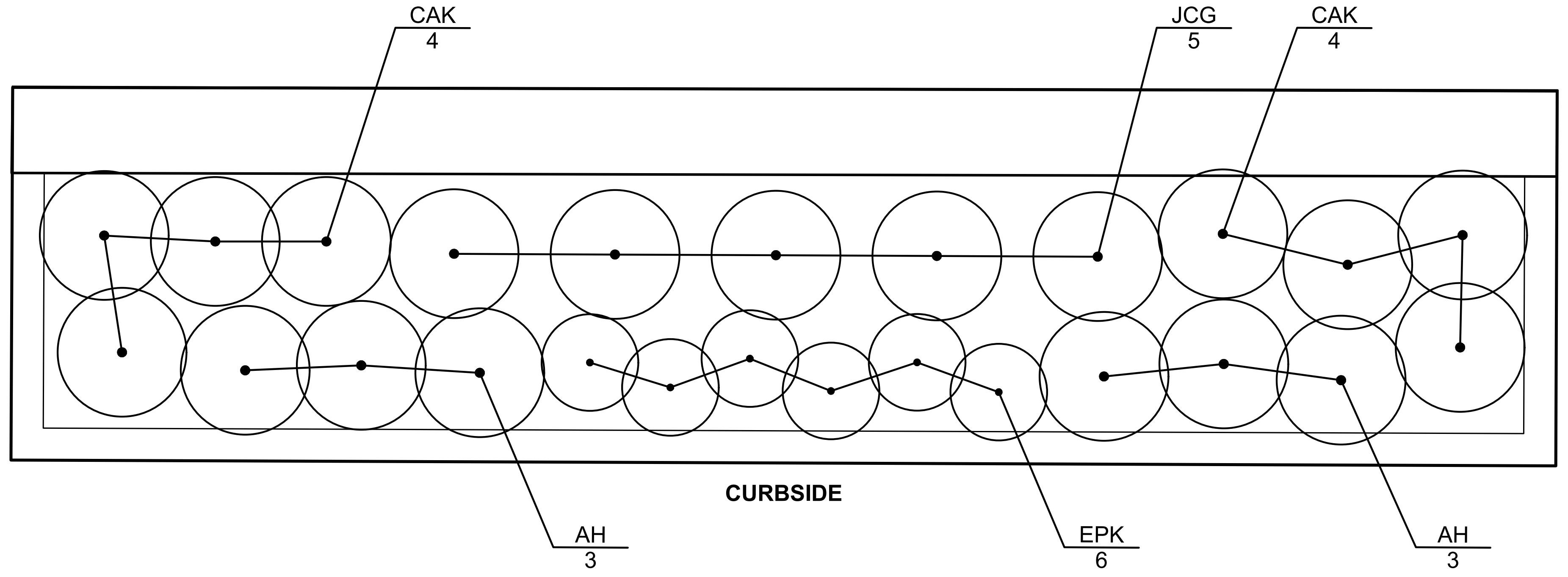
BENCH PLANTER - D

SCALE: ½" = 1'-0"



BENCH PLANTER - C

SCALE: ½" = 1'-0"



BENCH PLANTER - E

SCALE: ½" = 1'-0"

NOTE:
REFER TO PLANTING PLANS FOR PROPOSED TREE LOCATIONS.

NUMBER	DATE	MADE BY	CHECKED BY	REVISIONS

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AP

DESIGNED BY:
KC

CHECKED BY:
DJ

REGISTERED PROFESSIONAL

KIEN Y.
HO
CIVIL ENGINEER
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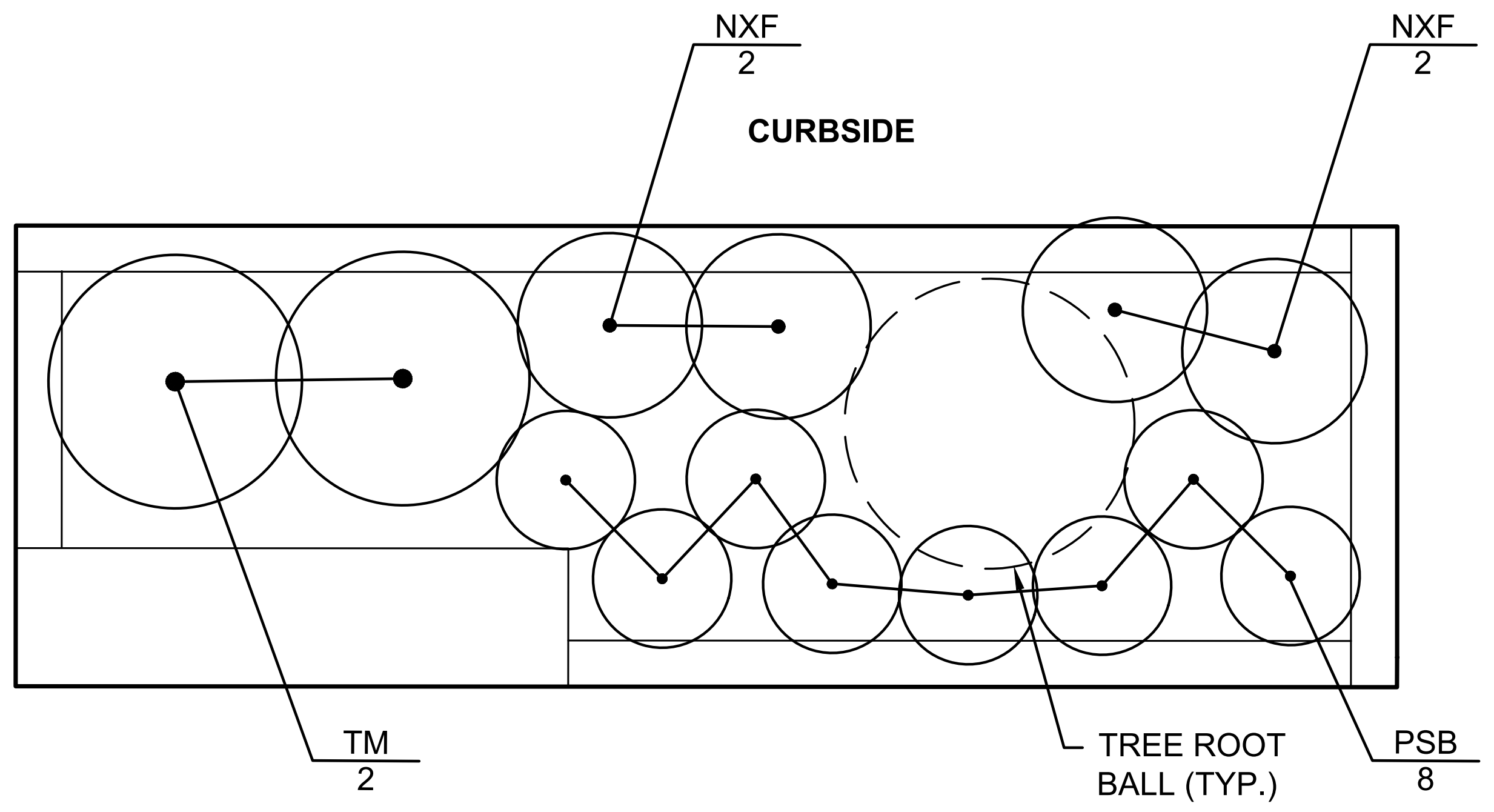
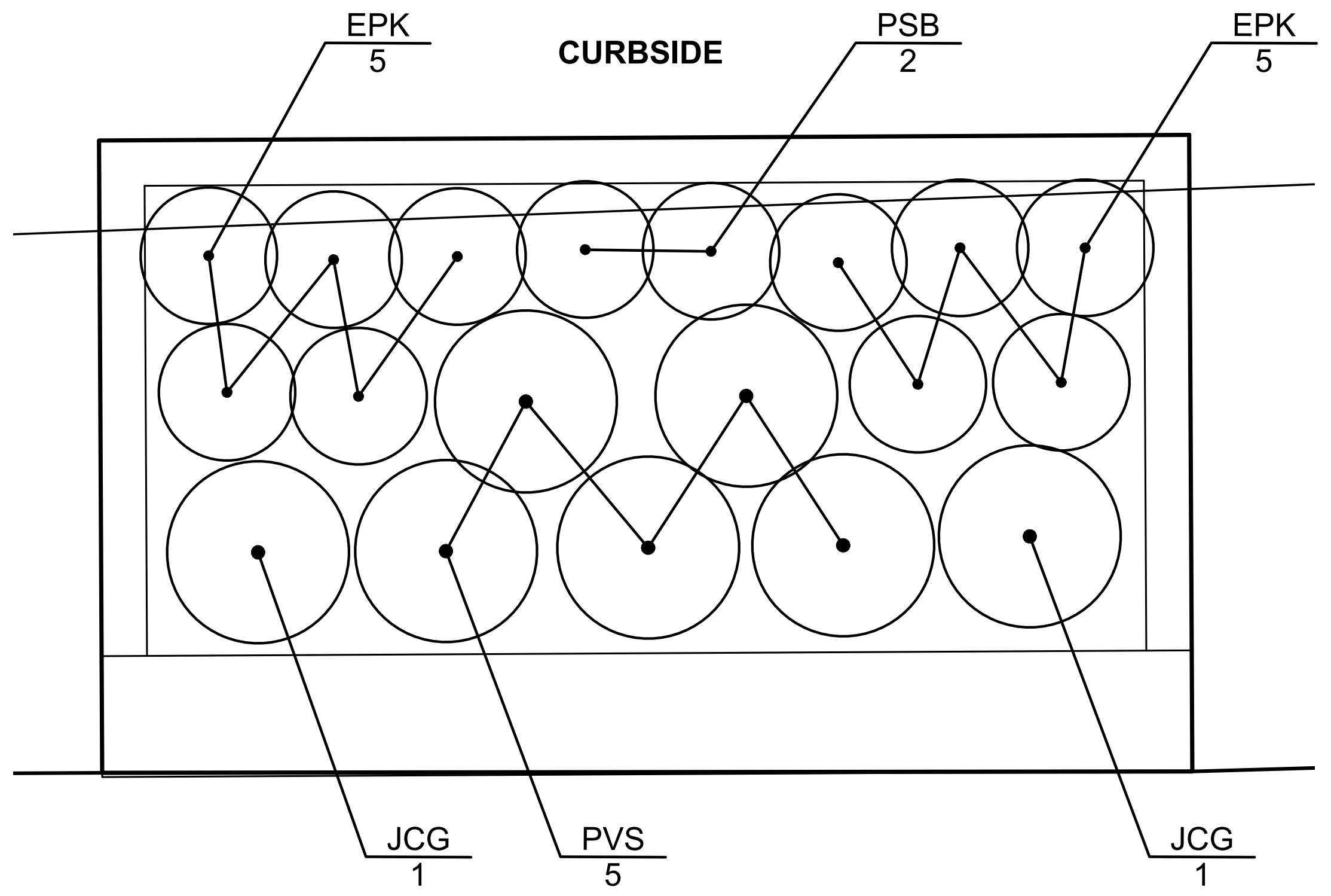


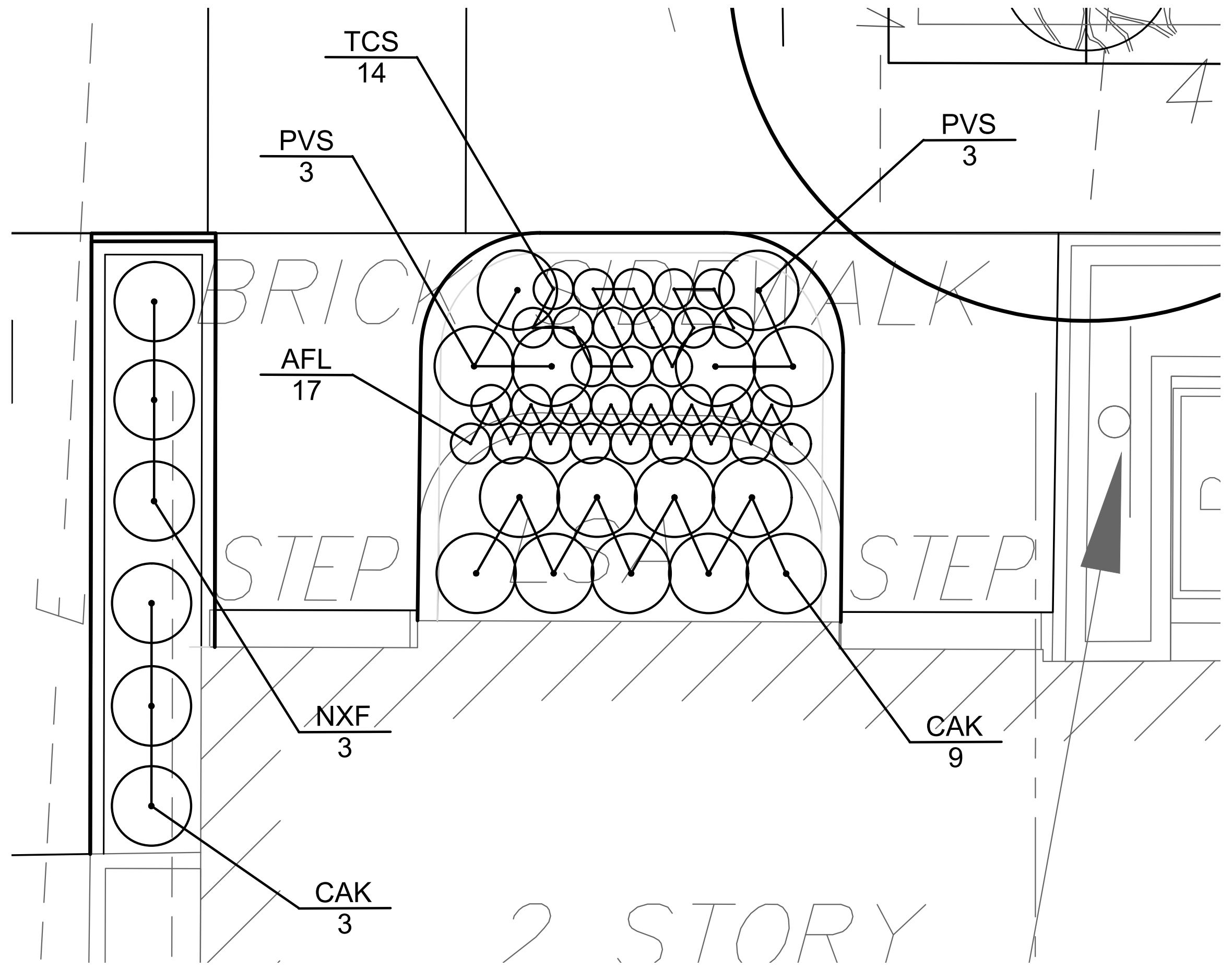
BENCH PLANTER - F

SCALE: 1/2" = 1'-0"



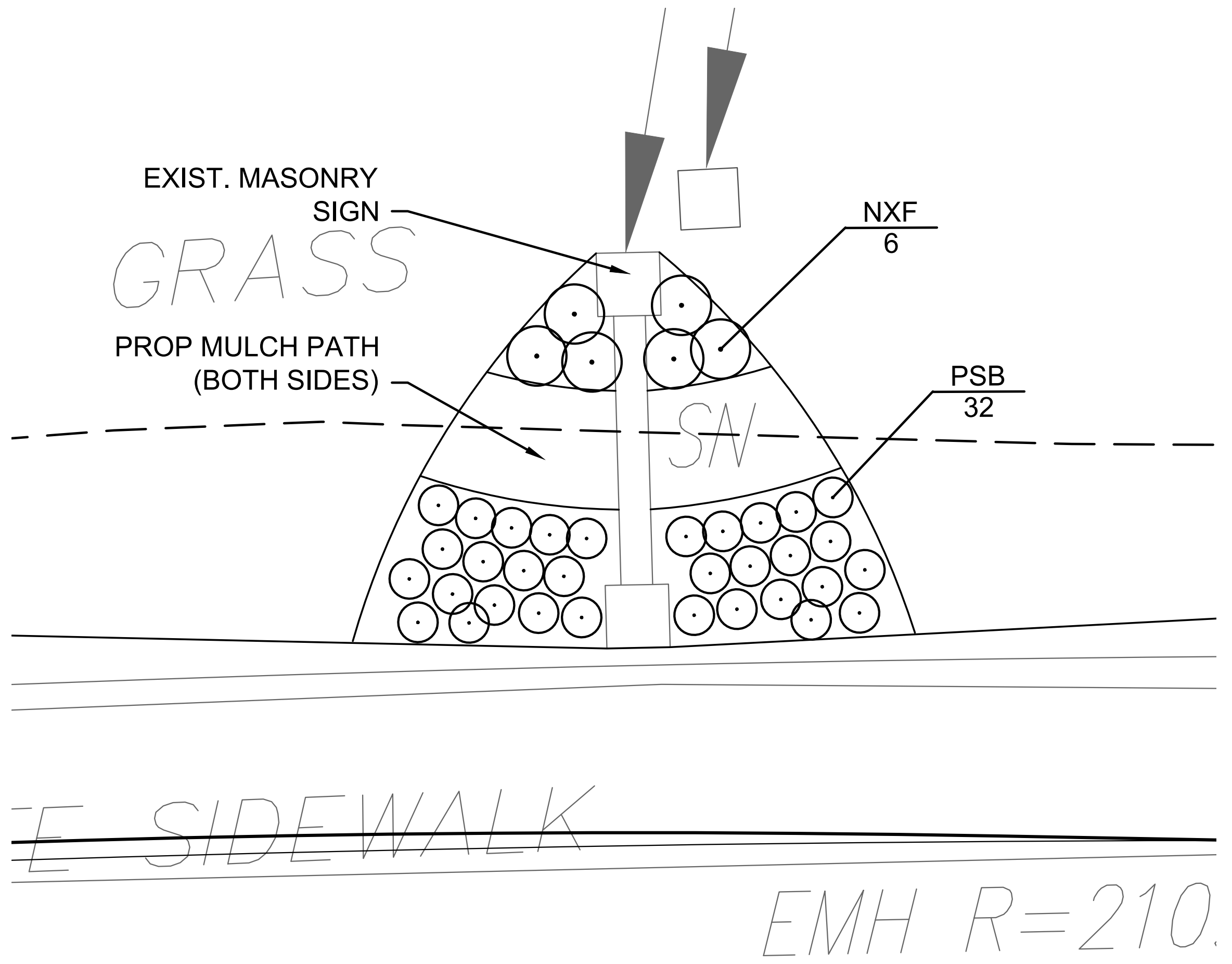
BENCH PLANTER - G

SCALE: 1/2" = 1'-0"



PLANTINGS - STA. 12+50 RT

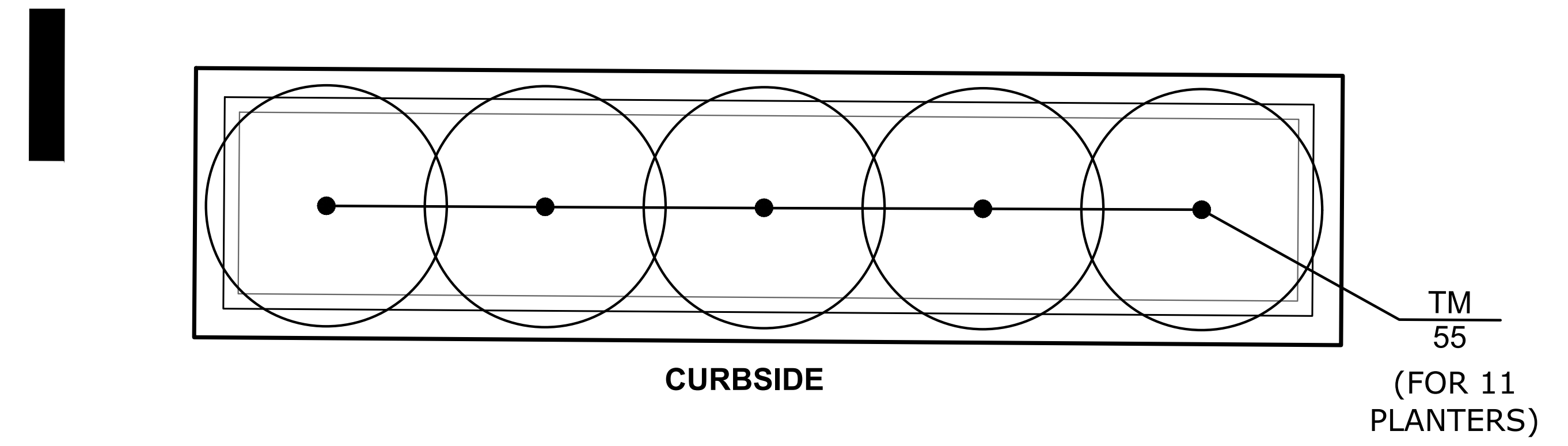
SCALE: $\frac{1}{4}$" = 1'-0"



PLANTINGS - STA. 27+30 LT

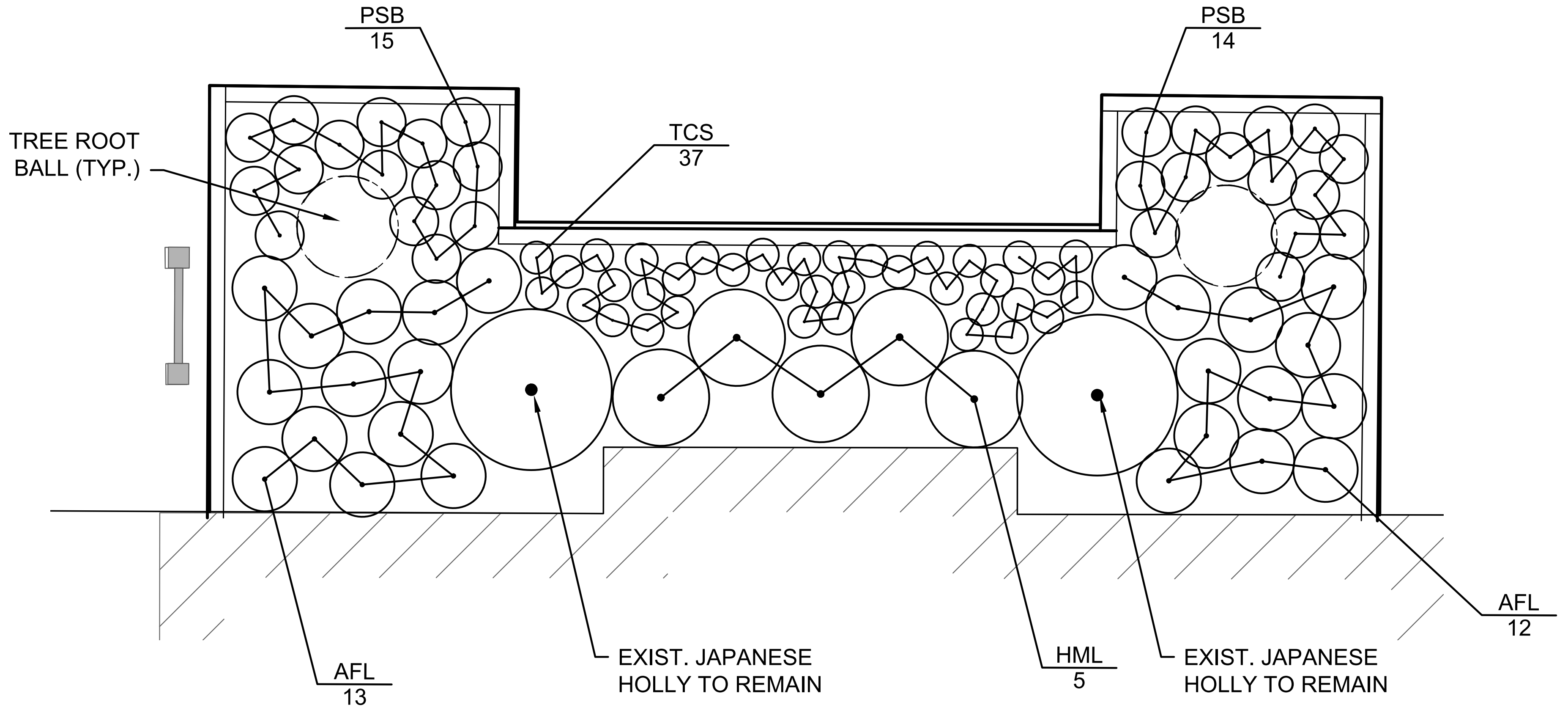
SCALE: $\frac{1}{4}$" = 1'-0"

PLANT SCHEDULE - PLANTERS				
KEY	BOTANICAL NAME *COMMON NAME*	QTY.	SIZE	NOTES
SHRUBS				
HML	HYDRANGEA MYCROPHYLLA 'LET'S DANCE' *LET'S DANCE BIGLEAF HYDRANGEA*	5	#2 CONT.	36" O.C.
JCG	JUNIPERUS COMMUNIS 'GOLD CONE' *GOLD CONE JUNIPER*	2	#5 CONT.	30" O.C.
TM	TAXUS MEDIA 'HICKSII' *HICKS ENGLISH YEW*	53	3'-3.5' B&B	48" O.C.
GRASSES & FERNS				
AFL	ATHYRIUM FILIX-FEMINA 'LADY IN RED' *LADY FERN*	51	#1 CONT.	24" O.C.
CAK	CALAMAGROSTIS 'KARL FOERSTER' *FOERSTER'S FEATHER REED GRASS*	28	#2 CONT.	24" O.C.
PVS	PANICUM VIRGATUM 'SHENANDOAH' *RED SWITCHGRASS*	21	#2 CONT.	24" O.C.
PERENNIALS				
EPK	ECHINACEA PUPUREA 'KIM'S KNEE HIGH' *PURPLE CONEFLOWER*	10	#2 CONT.	18" O.C.
NXF	NEPETA X FAASSENII 'JUNIOR WALKER' *JUNIOR WALKER CATMINT*	4	#1 CONT.	24" O.C.
PSB	PHLOX STOLONIFERA 'BRUCE'S WHITE' *BRUCE'S WHITE CREEPING PHLOX*	71	#1 CONT.	18" O.C.
TCS	TIARELLA CORDIFOLIA 'SUGAR AND SPICE' *FOAMFLOWER*	132	#2 CONT.	12" O.C.



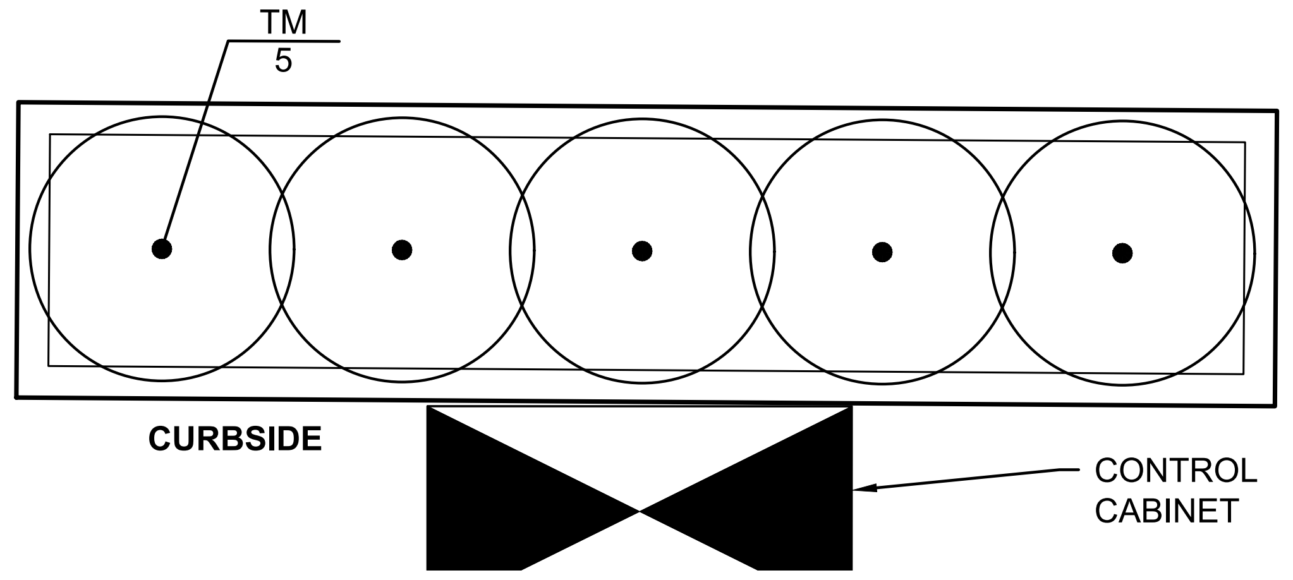
SHRUB PLANTER - TYPICAL FOR 12 PLANTERS

SCALE: $\frac{1}{2}$" = 1'-0"


PSB
15
PSB
14
TREE ROOT BALL (TYP.)
TCS
37
AFL
12
AFL
13
EXIST. JAPANESE HOLLY TO REMAIN
HML
5
EXIST. JAPANESE HOLLY TO REMAIN

WALLIS COURT ENLARGEMENT

SCALE: 1/4" = 1'-0"



SHRUB PLANTER - STA. 18+05 LT

SCALE: $\frac{1}{2}$" = 1'-0"

EDISON WAY ENLARGEMENT

SCALE: 1/8" = 1'-0"

NOTE:
REFER TO PLANTING PLANS FOR PROPOSED TREE LOCATIONS.

NUMBER	DATE	MADE BY	CHECKED BY	REVISIONS

DRAWN BY:
AP

DESIGNED BY:
KC

CHECKED BY:
DJ

REGISTERED PROFESSIONAL
KIEN Y. HO
CIVIL ENGINEER
No. 46331
Kien Ho
2/8/21

PREPARED BY
BETA
www.BETA-Inc.com

SUBCONSULTANT

SCALE
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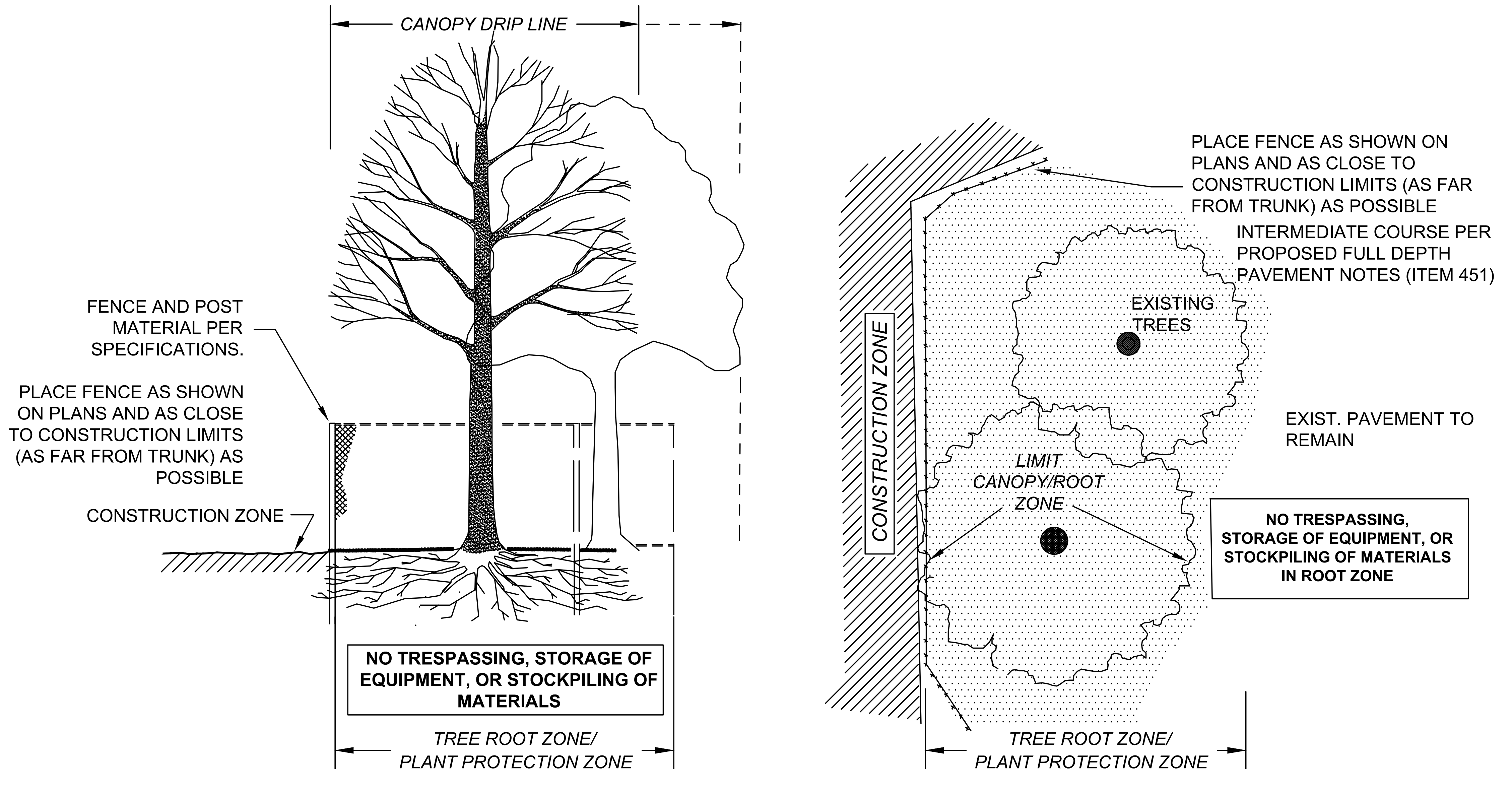
TITLE
TOWN CENTER IMPROVEMENTS
PLANTING PLAN - ENLARGEMENTS
LEXINGTON, MASSACHUSETTS

BETA JOB NO. 6331
ISSUE DATE 02/05/2021
SHEET NO. 69 OF 92

2/8/2021 12:31 PM O:\6300S\6331 - LEXINGTON CENTER STREETSCAPE\DRAWING FILES\PLANSET\6331 PLANTING ENLARGEMENTS.DWG (BETA STB BW STB)

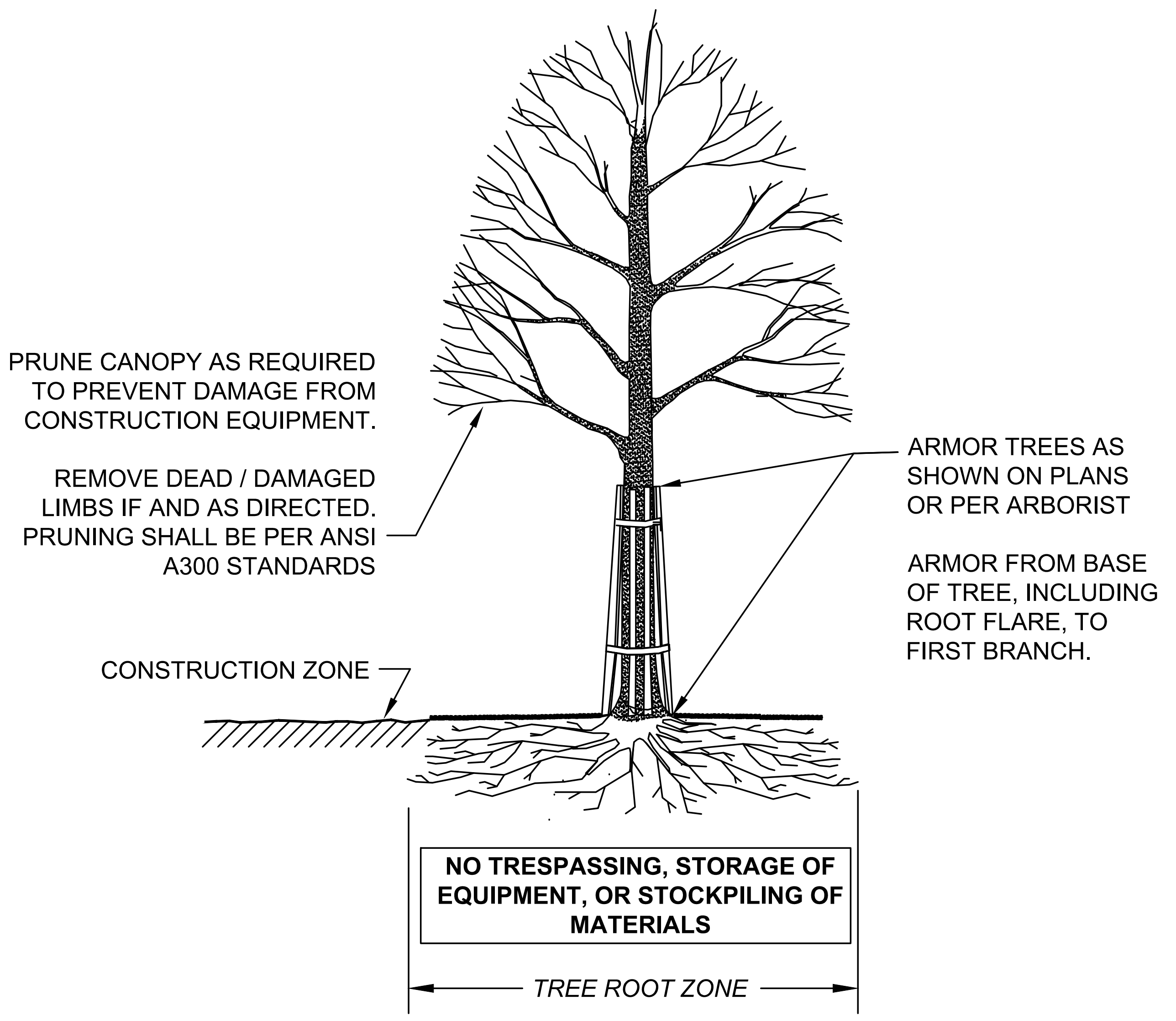

CANOPY DRIP LINE
FENCE AND POST MATERIAL PER SPECIFICATIONS.
PLACE FENCE AS SHOWN ON PLANS AND AS CLOSE TO CONSTRUCTION LIMITS (AS FAR FROM TRUNK) AS POSSIBLE
CONSTRUCTION ZONE
NO TRESPASSING, STORAGE OF EQUIPMENT, OR STOCKPILING OF MATERIALS
TREE ROOT ZONE/ PLANT PROTECTION ZONE
PLACE FENCE AS SHOWN ON PLANS AND AS CLOSE TO CONSTRUCTION LIMITS (AS FAR FROM TRUNK) AS POSSIBLE
INTERMEDIATE COURSE PER PROPOSED FULL DEPTH PAVEMENT NOTES (ITEM 451)
EXISTING TREES
CONSTRUCTION ZONE
LIMIT CANOPY/ROOT ZONE
EXIST. PAVEMENT TO REMAIN
NO TRESPASSING, STORAGE OF EQUIPMENT, OR STOCKPILING OF MATERIALS IN ROOT ZONE
TREE ROOT ZONE/ PLANT PROTECTION ZONE

SECTION - FENCE PROTECTION OF ROOT ZONE

PLAN VIEW - FENCE PROTECTION OF ROOT ZONE

TREE PROTECTION DETAIL - EXISTING TREE(S)

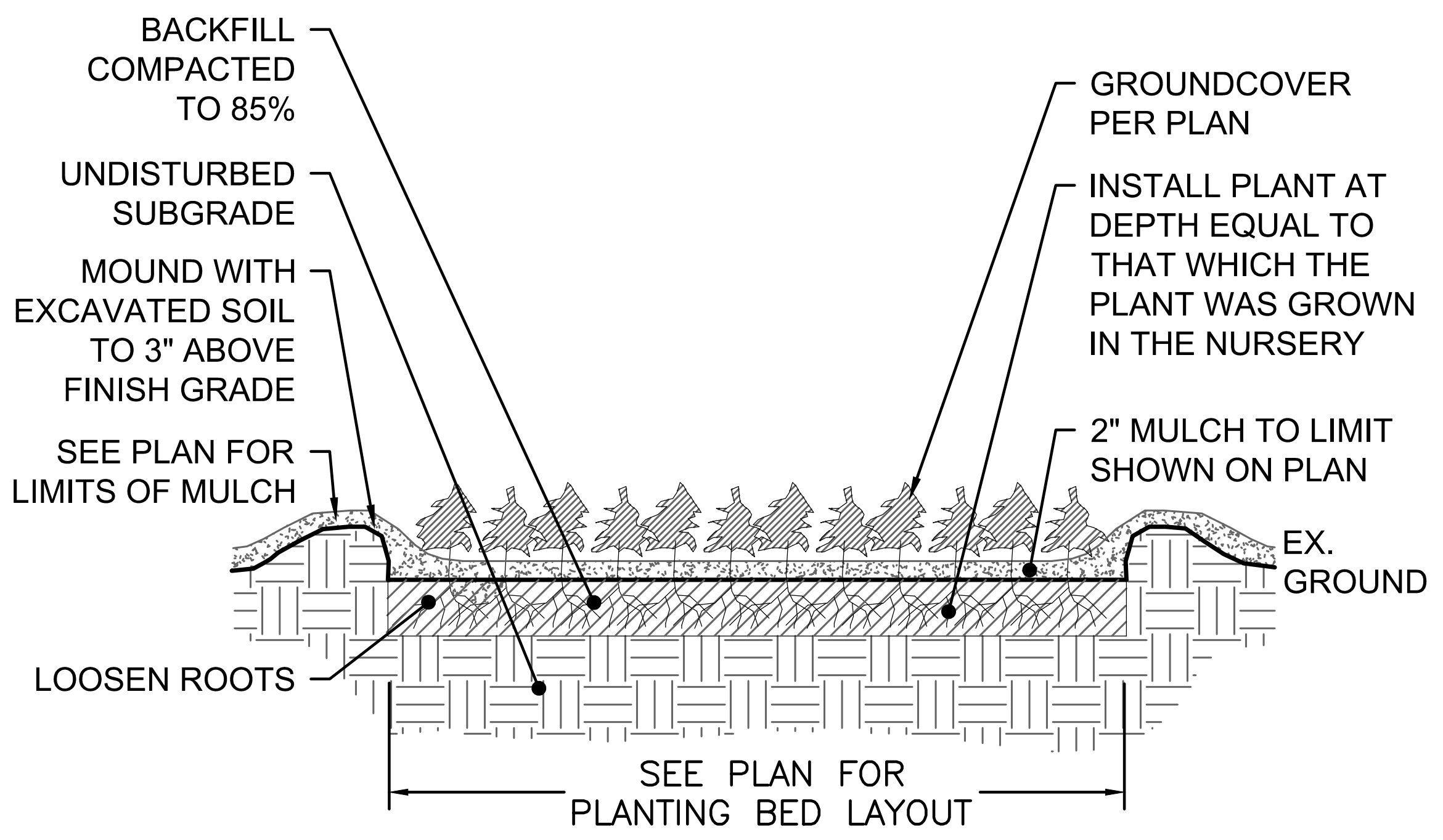
NOT TO SCALE


PRUNE CANOPY AS REQUIRED TO PREVENT DAMAGE FROM CONSTRUCTION EQUIPMENT.
REMOVE DEAD / DAMAGED LIMBS IF AND AS DIRECTED. PRUNING SHALL BE PER ANSI A300 STANDARDS
ARMOR TREES AS SHOWN ON PLANS OR PER ARBORIST
ARMOR FROM BASE OF TREE, INCLUDING ROOT FLARE, TO FIRST BRANCH.
CONSTRUCTION ZONE
NO TRESPASSING, STORAGE OF EQUIPMENT, OR STOCKPILING OF MATERIALS
TREE ROOT ZONE

SECTION - TRUNK ARMORING & PRUNING

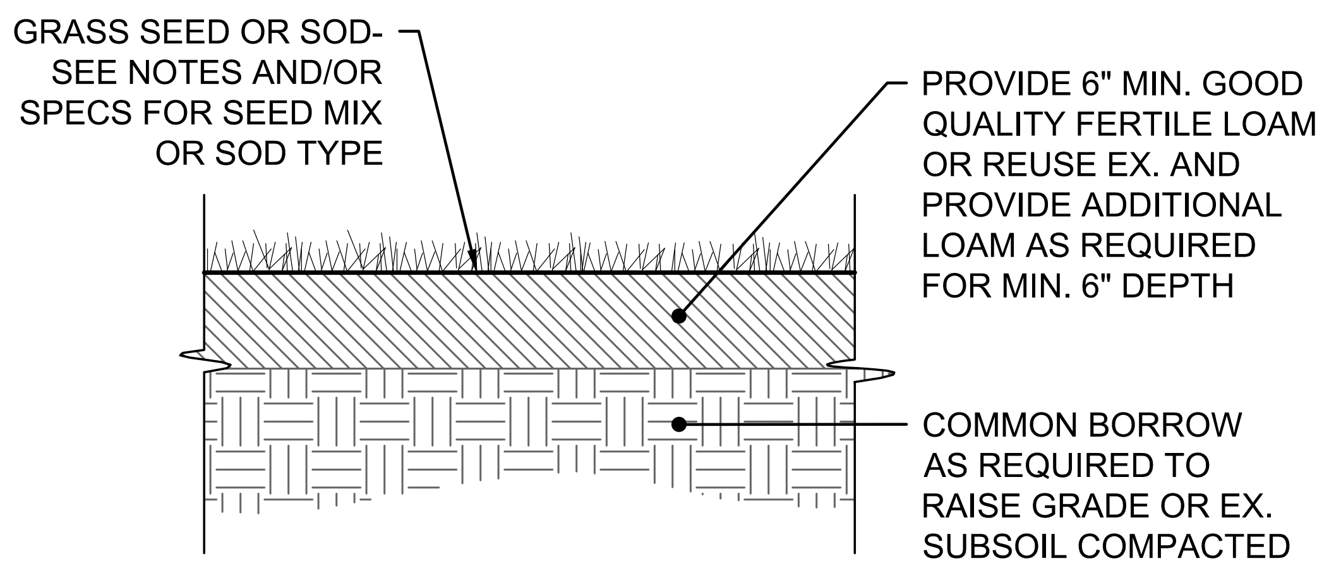
TREE PROTECTION - TRUNK

NOT TO SCALE


BACKFILL COMPACTED TO 85%
UNDISTURBED SUBGRADE
MOUND WITH EXCAVATED SOIL TO 3" ABOVE FINISH GRADE
SEE PLAN FOR LIMITS OF MULCH
LOOSEN ROOTS
GROUNDCOVER PER PLAN
INSTALL PLANT AT DEPTH EQUAL TO THAT WHICH THE PLANT WAS GROWN IN THE NURSERY
2" MULCH TO LIMIT SHOWN ON PLAN
EX. GROUND
SEE PLAN FOR PLANTING BED LAYOUT

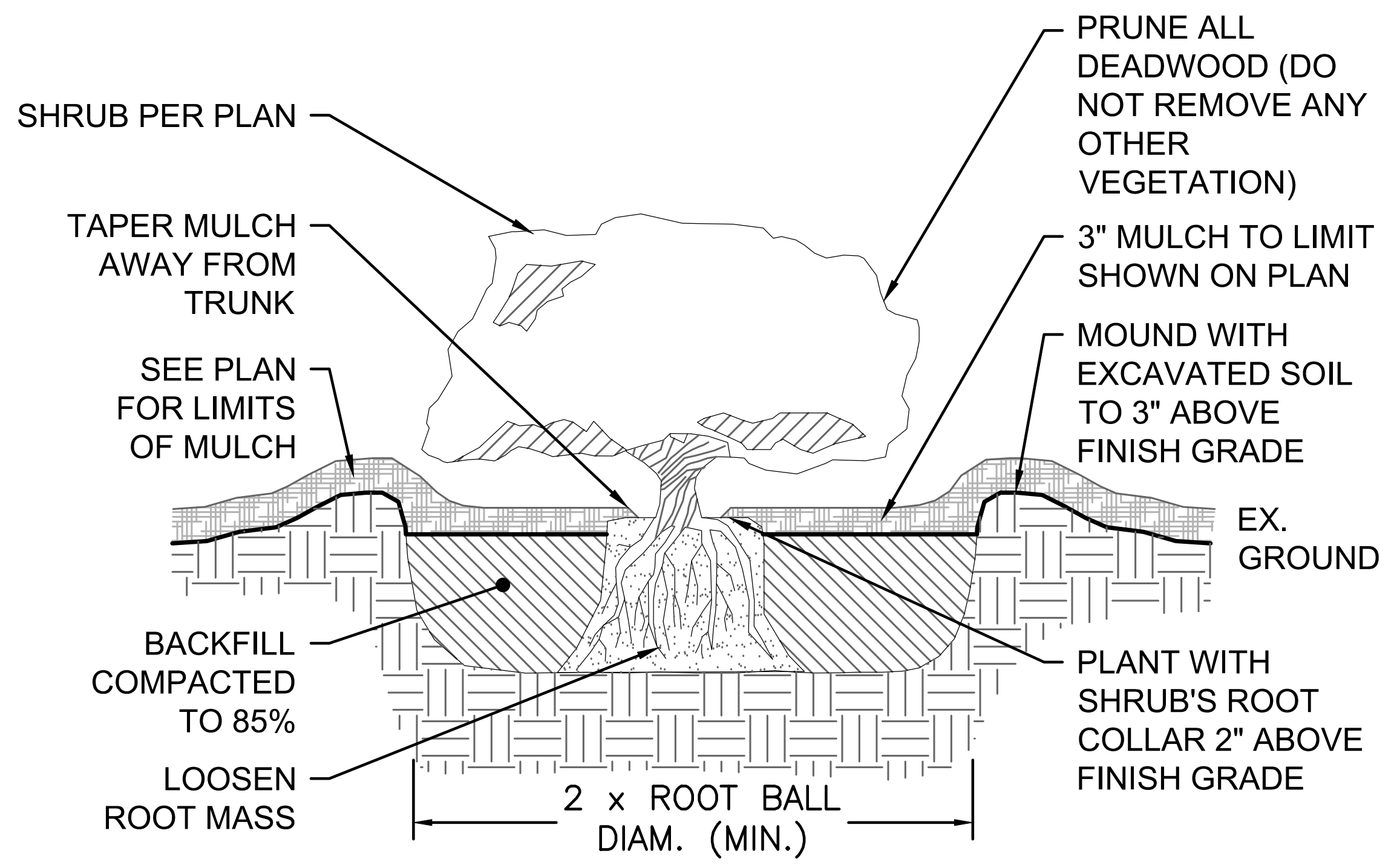
GROUNDCOVER PLANTING

NOT TO SCALE


GRASS SEED OR SOD- SEE NOTES AND/OR SPECS FOR SEED MIX OR SOD TYPE
PROVIDE 6" MIN. GOOD QUALITY FERTILE LOAM OR REUSE EX. AND PROVIDE ADDITIONAL LOAM AS REQUIRED FOR MIN. 6" DEPTH
COMMON BORROW AS REQUIRED TO RAISE GRADE OR EX. SUBSOIL COMPACTED

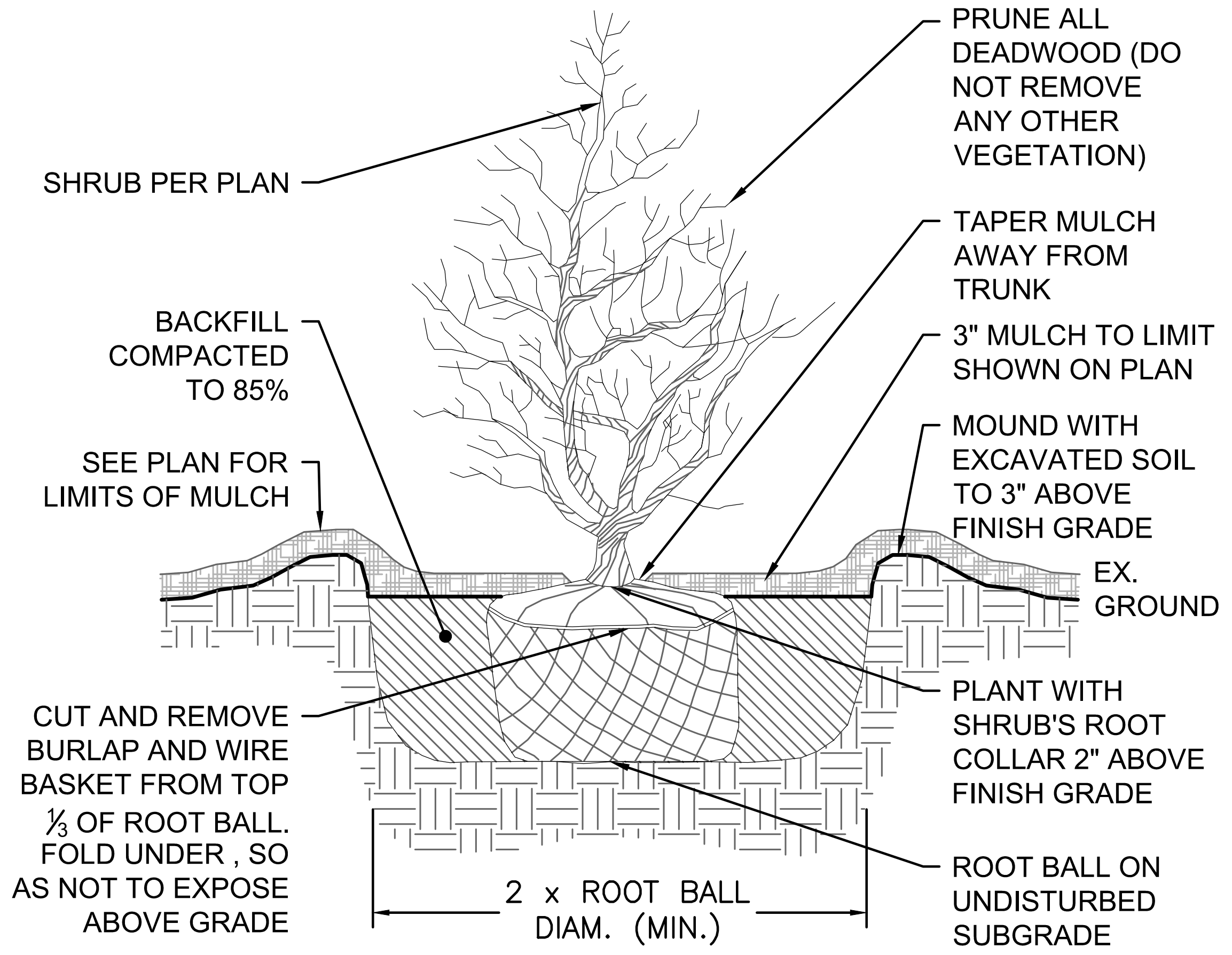
LOAM AND SEED OR LOAM AND SOD

NOT TO SCALE


SHRUB PER PLAN
TAPER MULCH AWAY FROM TRUNK
SEE PLAN FOR LIMITS OF MULCH
BACKFILL COMPACTED TO 85%
LOOSEN ROOT MASS
PRUNE ALL DEADWOOD (DO NOT REMOVE ANY OTHER VEGETATION)
3" MULCH TO LIMIT SHOWN ON PLAN
MOUND WITH EXCAVATED SOIL TO 3" ABOVE FINISH GRADE
EX. GROUND
PLANT WITH SHRUB'S ROOT COLLAR 2" ABOVE FINISH GRADE
2 x ROOT BALL DIAM. (MIN.)

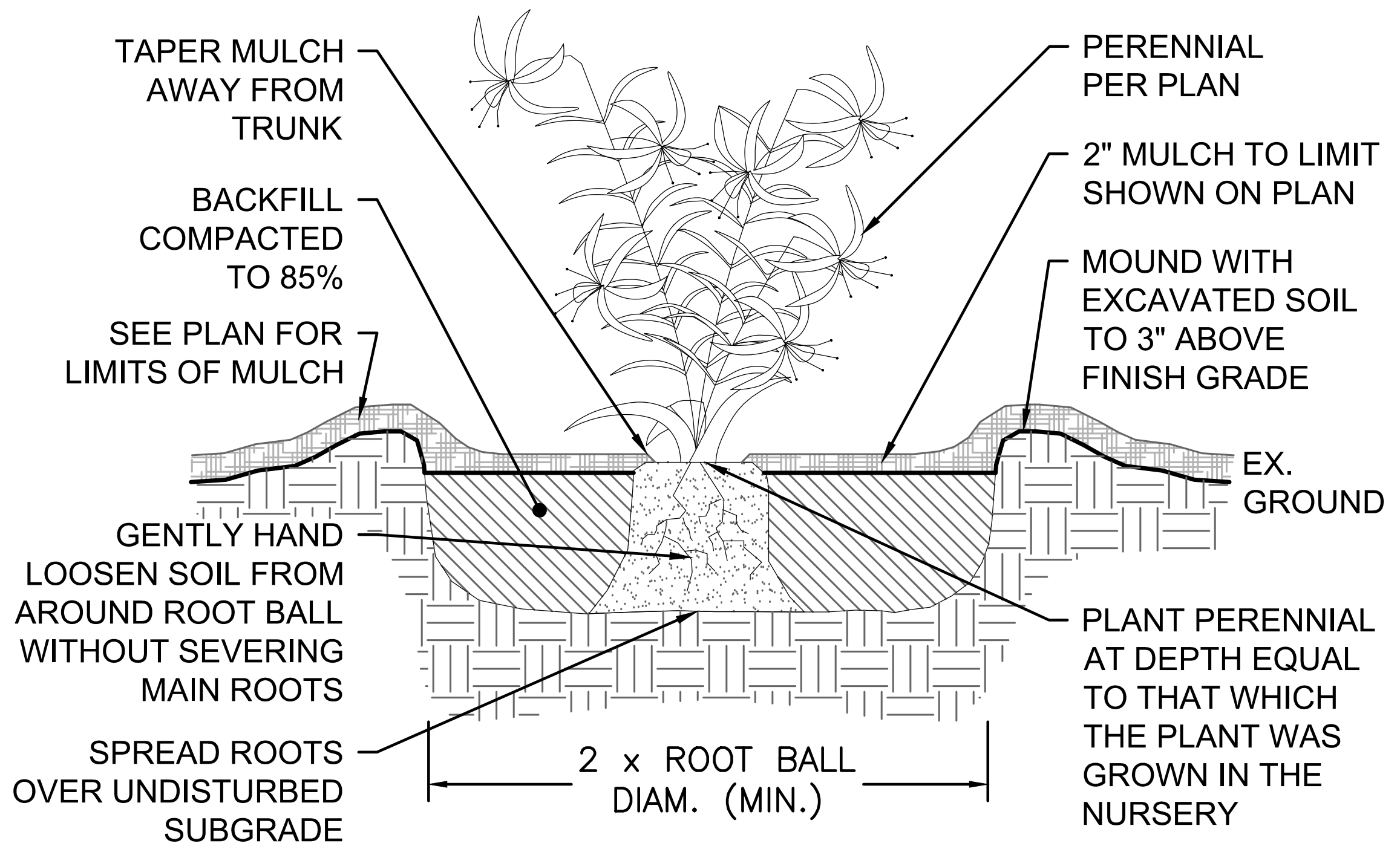
CONTAINER GROWN TREE & SHRUB PLANTING

NOT TO SCALE


SHRUB PER PLAN
BACKFILL COMPACTED TO 85%
SEE PLAN FOR LIMITS OF MULCH
CUT AND REMOVE BURLAP AND WIRE BASKET FROM TOP ⅓ OF ROOT BALL. FOLD UNDER , SO AS NOT TO EXPOSE ABOVE GRADE
PRUNE ALL DEADWOOD (DO NOT REMOVE ANY OTHER VEGETATION)
TAPER MULCH AWAY FROM TRUNK
3" MULCH TO LIMIT SHOWN ON PLAN
MOUND WITH EXCAVATED SOIL TO 3" ABOVE FINISH GRADE
EX. GROUND
PLANT WITH SHRUB'S ROOT COLLAR 2" ABOVE FINISH GRADE
ROOT BALL ON UNDISTURBED SUBGRADE
2 x ROOT BALL DIAM. (MIN.)

SHRUB PLANTING

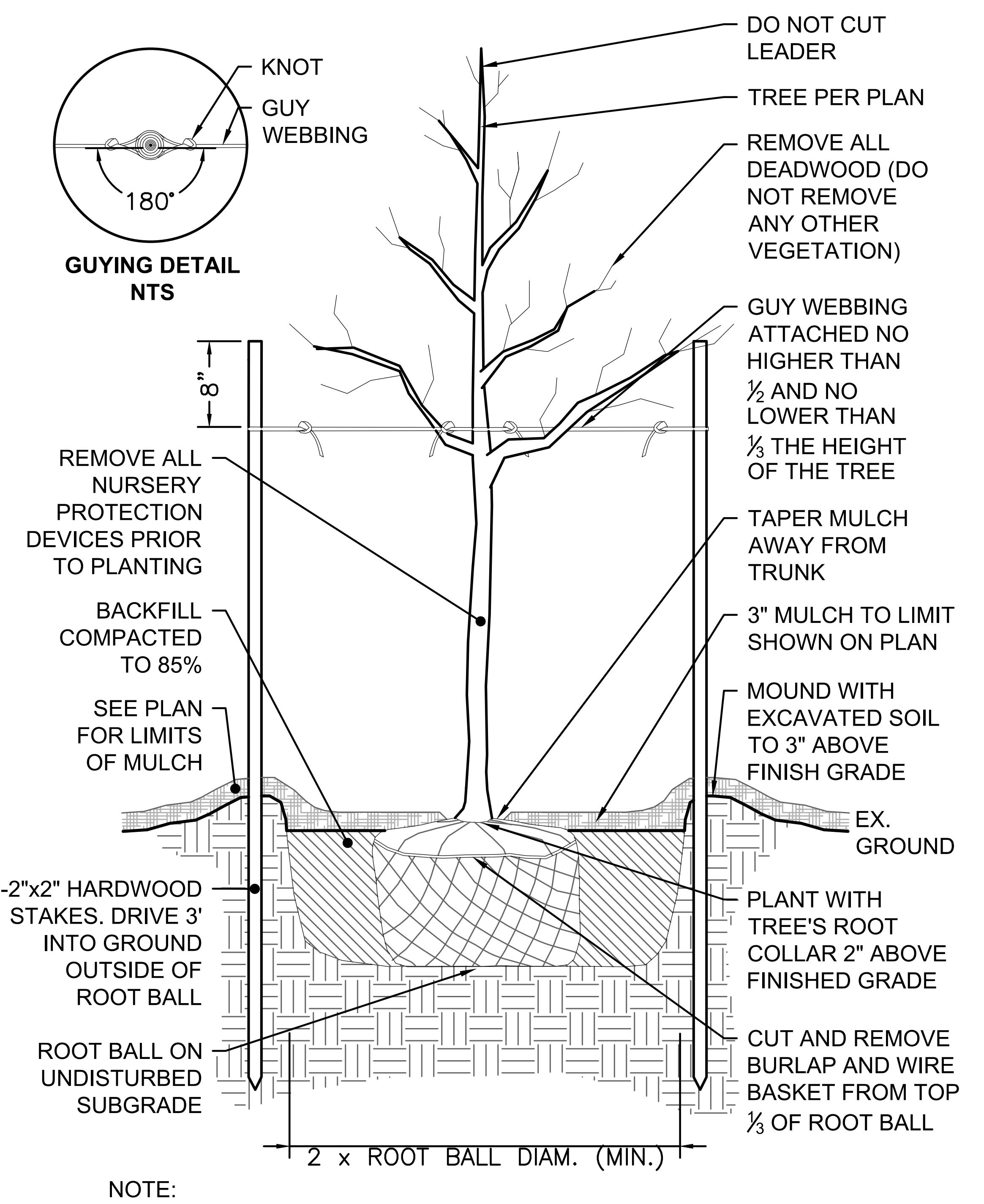
NOT TO SCALE


TAPER MULCH AWAY FROM TRUNK
BACKFILL COMPACTED TO 85%
SEE PLAN FOR LIMITS OF MULCH
GENTLY HAND LOOSEN SOIL FROM AROUND ROOT BALL WITHOUT SEVERING MAIN ROOTS
SPREAD ROOTS OVER UNDISTURBED SUBGRADE
PERENNIAL PER PLAN
2" MULCH TO LIMIT SHOWN ON PLAN
MOUND WITH EXCAVATED SOIL TO 3" ABOVE FINISH GRADE
EX. GROUND
PLANT PERENNIAL AT DEPTH EQUAL TO THAT WHICH THE PLANT WAS GROWN IN THE NURSERY
2 x ROOT BALL DIAM. (MIN.)

PERENNIALS & GRASSES PLANTING

NOT TO SCALE

TOTAL PLANT LIST				
KEY	**BOTANICAL NAME** *COMMON NAME*	**QTY.**	**SIZE**	**NOTES**
TREES				
AC	AMELANCHIER CANADENSIS *SERVICEBERRY*	2	3.5"-4" CAL.	B&B
CBE	CARPINUS BETULUS 'EMERALD AVENUE' *EMERALD AVENUE HORNBEAM*	8	3.5"-4" CAL.	B&B
GTS	GLEDITSIA TRIACANTHOS INERMIS 'SKYCOLE' *HONEY LOCUST*	32	3.5"-4" CAL.	B&B
LT	LIRIODENDRON TULIPIFERA 'EMERALD CITY' *EMERALD CITY TULIP TREE*	5	3.5"-4" CAL.	B&B
ZSG	ZELKOVA SERRATA 'GREEN VASE' *JAPANESE ZELKOVA*	37	3.5"-4" CAL.	B&B
ZSM	ZELKOVA SERRATA 'MUSASHINO' *SLENDER JAPANESE ZELKOVA*	3	3.5"-4" CAL.	B&B
SHRUBS				
HML	HYDRANGEA MYCROPHYLLA 'LET'S DANCE' *LET'S DANCE BIGLEAF HYDRANGEA*	5	#2 CONT.	36" O.C.
JCG	JUNIPERUS COMMUNIS 'GOLD CONE' *GOLD CONE JUNIPER*	12	#5 CONT.	30" O.C.
TM	TAXUS MEDIA 'HICKSII' *HICKS ENGLISH YEW*	74	3'-3.5' B&B	48" O.C.
GRASSES & FERNS				
AFL	ATHYRIUM FILIX-FEMINA 'LADY IN RED' *LADY FERN*	55	#1 CONT.	24" O.C.
CAK	CALAMAGROSTIS 'KARL FOERSTER' *FOERSTER'S FEATHER REED GRASS*	42	#2 CONT.	24" O.C.
PVS	PANICUM VIRGATUM 'SHENANDOAH' *RED SWITCHGRASS*	26	#2 CONT.	24" O.C.
PERENNIALS				
AH	AMSONIA HUBRICHTII *ARKANSAS BLUESTAR*	14	#2 CONT.	24" O.C.
EPK	ECHINACEA PUPUREA 'KIM'S KNEE HIGH' *PURPLE CONEFLOWER*	30	#2 CONT.	18" O.C.
NXF	NEPETA X FAASSENII 'JUNIOR WALKER' *JUNIOR WALKER CATMINT*	23	#1 CONT.	24" O.C.
PSB	PHLOX STOLONIFERA 'BRUCE'S WHITE' *BRUCE'S WHITE CREEPING PHLOX*	89	#1 CONT.	18" O.C.
TCS	TIARELLA CORDIFOLIA 'SUGAR AND SPICE' *FOAMFLOWER*	143	#2 CONT.	12" O.C.


KNOT
GUY WEBBING
180°
GUYING DETAIL
NTS
DO NOT CUT LEADER
TREE PER PLAN
REMOVE ALL DEADWOOD (DO NOT REMOVE ANY OTHER VEGETATION)
GUY WEBBING ATTACHED NO HIGHER THAN ½ AND NO LOWER THAN ⅓ THE HEIGHT OF THE TREE
8"
REMOVE ALL NURSERY PROTECTION DEVICES PRIOR TO PLANTING
BACKFILL COMPACTED TO 85%
SEE PLAN FOR LIMITS OF MULCH
3-2"x2" HARDWOOD STAKES. DRIVE 3' INTO GROUND OUTSIDE OF ROOT BALL
ROOT BALL ON UNDISTURBED SUBGRADE
TAPER MULCH AWAY FROM TRUNK
3" MULCH TO LIMIT SHOWN ON PLAN
MOUND WITH EXCAVATED SOIL TO 3" ABOVE FINISH GRADE
EX. GROUND
PLANT WITH TREE'S ROOT COLLAR 2" ABOVE FINISHED GRADE
CUT AND REMOVE BURLAP AND WIRE BASKET FROM TOP ⅓ OF ROOT BALL
2 x ROOT BALL DIAM. (MIN.)

NOTE:
AFTER THE GUARANTEE PERIOD THE CONTRACTOR WILL BE RESPONSIBLE FOR THE REMOVAL OF STAKES AND GUY WEBBING.

DECIDUOUS TREE STAKING & PLANTING

NOT TO SCALE

NOTE:
SEE MODULAR SOIL CELL TREE GRATE AND GRANITE PLANTER CURB DETAILS FOR ADDITIONAL TREE PLANTING DETAILS.

2/8/2021 12:33 PM O:\6300S\6331 - LEXINGTON CENTER STREETSCAPE\DRAWING FILES\PLANSET\6331 SITE DETAILS.DWG (BETA STB BW.STB)

NUMBER	DATE	MADE BY	CHECKED BY	REVISIONS

DRAWN BY: AP
DESIGNED BY: KC
CHECKED BY: DJ

REGISTERED PROFESSIONAL
KIEN Y. HO
CIVIL ENGINEER
No. 46431
2/8/21

PREPARED BY
BETA
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SUBCONSULTANT

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TITLE
TOWN CENTER IMPROVEMENTS
PLANTING DETAILS
LEXINGTON, MASSACHUSETTS

BETA JOB NO. 6331
ISSUE DATE 02/05/2021
SHEET NO. 70 OF 92

MERIAM STREET
DEPOT SQUARE
DEPOT SQUARE
MASSACHUSETTS AVENUE (ROUTES 4 & 225)
MUZZEY STREET
N/F TOWN OF LEXINGTON #1875 MASSACHUSETTS AVENUE MAP/PARCEL: 49/4A
N/F THE GIROUX BUILDING LIMITED PARTNERSHIP #1853-1833 MASSACHUSETTS AVENUE MAP/PARCEL: 49/8A
N/F TOWN OF LEXINGTON EMERY PARK MAP/PARCEL: 49/11
N/F 1775 MASS AVE LLC #1779-1789 MASSACHUSETTS AVENUE #3-#9 DEPOT STREET SQUARE MAP/PARCEL: 49/12A
N/F TOWN OF LEXINGTON #1874 MASSACHUSETTS AVENUE MAP/PARCEL: 49/77
N/F BANKNORTH NA #1840 MASSACHUSETTS AVENUE MAP/PARCEL: 49/75
N/F BANKNORTH NA #1834 MASSACHUSETTS AVENUE MAP/PARCEL: 49/74
N/F S-BNK LEXINGTON, LLC #1822 MASSACHUSETTS AVENUE MAP/PARCEL: 49/73A
N/F 1844 MASSACHUSETTS AVENUE REALTY TRUST #1844 MASSACHUSETTS AVENUE MAP/PARCEL: 49/76
N/F MICHELSON #1792-1812 MASSACHUSETTS AVENUE MAP/PARCEL: 49/38
N/F VERNIER #1788 MASSACHUSETTS AVENUE MAP/PARCEL: 49/37A
N/F MICHELSON #1780 MASSACHUSETTS AVENUE MAP/PARCEL: 49/37B
N/F SKORZ/LE #1770-1778 MASSAC MAP/PARCE
1845
1841
1837
1833
1793
1787
1781
1777
1840
1822
1810
1806
1800
1796
1794
1792
1788
1780
41+90
41+00
40+00
11+00
12+00
13+00
50+00
14+00
60+00
15+00
52+00
53+00
16+00
61+00
(5) 2" NM CONDUITS
(1) 2" WITH 3#8,1#8G GND (LTG CIRCUIT 10)
(1) 2" WITH 3#4,1#4G GND (LTG CIRCUIT 14)
(1) 2" WITH 3#6,1#6 GND (LTG CIRCUIT 18)
(1) 2" WITH 2#2,1#2 GND (GFI CIRCUIT 11)
(1) 2" SPARE
(4) 2" NM CONDUITS
(1) 2" WITH 3#8,1#8G GND (LTG CIRCUIT 10)
(1) 2" WITH 3#4,1#4G GND (LTG CIRCUIT 14)
(1) 2" WITH 3#6,1#6 GND (LTG CIRCUIT 18)
(1) 2" WITH 2#2,1#2 GND (GFI CIRCUIT 11)
(1) 2" 3#6,1#6G LTG CIRCUIT 18
TYPE A HANDHOLE
LP #2 TYPE A PANEL SLP1 CIRCUIT 18
LP #4 TYPE A PANEL SLP1 CIRCUIT 18
LP #6 TYPE A PANEL SLP1 CIRCUIT 18
LP #8 TYPE A PANEL SLP1 CIRCUIT 18
EXISTING UTILITY MANHOLE
TYPE B HANDHOLE POWER 11"x18"x12" COMPOSOLITE (TYP)
LP #10 TYPE A PANEL SLP1 CIRCUIT 18
OUTLET #1 TYPE 1 PANEL SLP1 CIRCUIT 11
LP #12 TYPE A PANEL SLP1 CIRCUIT 18
LP #14 TYPE F PANEL SLP1 CIRCUIT 18
LP #16 TYPE A PANEL SLP1 CIRCUIT 18
LP #18 TYPE F PANEL SLP1 CIRCUIT 18
OUTLET #3 TYPE 1 PANEL SLP1 CIRCUIT 11
LP #20 TYPE A PANEL SLP1 CIRCUIT 18
LP #22 TYPE A PANEL SLP1 CIRCUIT 18
LP #24 TYPE A PANEL SLP1 CIRCUIT 18
LP #26 TYPE A PANEL SLP1 CIRCUIT 18
LP #28 TYPE A PANEL SLP1 CIRCUIT 18
SLP1-18
(1) 2" ?#?, LTG CIRCUIT
NOTE TYPE HANDHOL
LP # TYPE PANEL SL CIRCUIT
CONTINUED ON SHEET NO. 72
(1) 3" NM CONDUIT SEE NOTE 14
LP #1 TYPE B PANEL SLP1 CIRCUIT 2
SLP1-2
LP #3 TYPE B PANEL SLP1 CIRCUIT 2
(1) 2" 3#12, 1#12G LTG CIRCUIT 2
LP #5 TYPE A PANEL SLP1 CIRCUIT 2
TYPE A HANDHOLE POWER 24"x36"x24" COMPOSOLITE (TYP)
PROPOSED ENCLOSURE #1 WITH PANELBOARD SLP1 ON CONCRETE FOUNDATION
OUTLET #2 TYPE 1 PANEL SLP1 CIRCUIT 3
LP #7 TYPE B PANEL SLP1 CIRCUIT 6
OUTLET #4 TYPE 1 PANEL SLP1 CIRCUIT 3
OUTLET #6 TYPE 1 PANEL SLP1 CIRCUIT 3
LP #9 TYPE B PANEL SLP1 CIRCUIT 6
OUTLET #8 TYPE 2 PANEL SLP1 CIRCUIT 3
SLP1-3
(5) 2" NM CONDUITS
(1) 2" WITH 3#8,1#8 GND (LTG CIRCUIT 6)
(1) 2" WITH 2#6,1#6 GND (GFI CIRCUIT 3)
(1) 2" WITH 2#4,1#4 GND (GFI CIRCUIT 5)
(1) 2" WITH 2#3,1#3 GND (GFI CIRCUIT 7)
(1) 2" WITH 2#1,1#1 GND (GFI CIRCUIT 9)
(12) 2" NM CONDUITS
(1) 2" WITH 2#2,1#2 GND (GFI CIRCUIT 11)
(1) 2" WITH 3#6,1#6 GND (LTG CIRCUIT 18)
(1) 2" WITH 3#4,1#4G GND (LTG CIRCUIT 14)
(1) 2" WITH 3#8,1#8G GND (LTG CIRCUIT 10)
(1) 2" WITH 3#12,1#12 GND (LTG CIRCUIT 2)
(1) 2" WITH 3#8,1#8 GND (LTG CIRCUIT 6)
(1) 2" WITH 2#6,1#6 GND (GFI CIRCUIT 3)
(1) 2" WITH 2#4,1#4 GND (GFI CIRCUIT 5)
(1) 2" WITH 2#3,1#3 GND (GFI CIRCUIT 7)
(1) 2" WITH 2#1,1#1 GND (GFI CIRCUIT 9)
(2) 2" SPARE
LP #11 TYPE E2 NOTE 15
(4) 2" NM CONDUITS
(1) 2" WITH 3#8,1#8 GND (LTG CIRCUIT 6)
(1) 2" WITH 2#4,1#4 GND (GFI CIRCUIT 5)
(1) 2" WITH 2#3,1#3 GND (GFI CIRCUIT 7)
(1) 2" WITH 2#1,1#1 GND (GFI CIRCUIT 9)
LP #13 TYPE C PANEL SLP1 CIRCUIT 6
OUTLET #10 TYPE 1 PANEL SLP1 CIRCUIT 5
OUTLET #12 TYPE 1 PANEL SLP1 CIRCUIT 5
LP #15 TYPE C PANEL SLP1 CIRCUIT 6
OUTLET #14 TYPE 2 PANEL SLP1 CIRCUIT 5
OUTLET #16 TYPE 1 PANEL SLP1 CIRCUIT 5
SLP1-5
LP #17 TYPE B PANEL SLP1 CIRCUIT 6
OUT TYP PAN CIRC
(3) 2" NM CONDU
(1) 2" WITH 3#8,1
(1) 2" WITH 2#3,1
(1) 2" WITH 2#1,1

NOTES:

1. REFER TO LIGHTING PLAN SHEET 74 OF 92 FOR ADDITIONAL NOTES

NUMBER	DATE	MADE BY	CHECKED BY	REVISIONS

DRAWN BY: PMG

DESIGNED BY: PMG

CHECKED BY: SA

REGISTERED PROFESSIONAL

COMMONWEALTH OF MASSACHUSETTS
M. SALIM AFSAR
ELECTRICAL
No. 39083
REGISTERED PROFESSIONAL ENGINEER

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Pawtucket, RI 02860

SCALE

20 0 20 40
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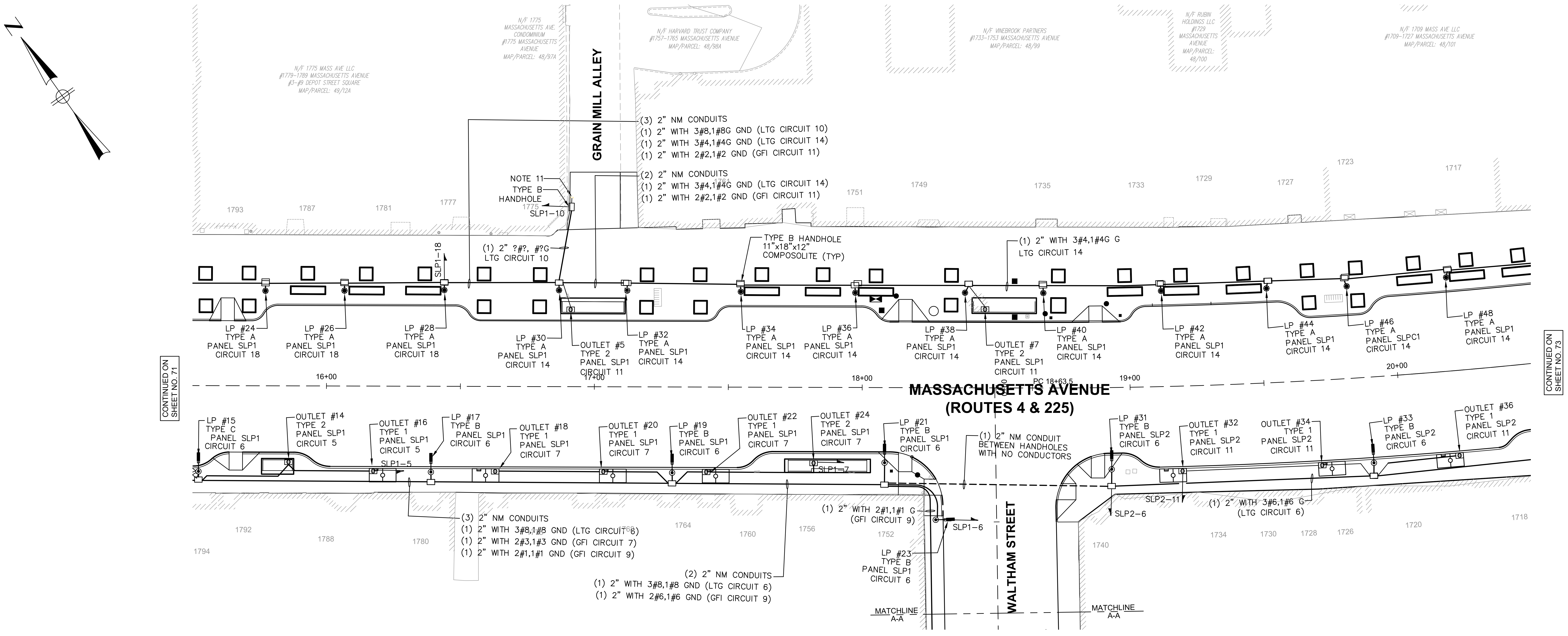
TITLE

TOWN CENTER IMPROVEMENTS
LIGHTING PLAN
LEXINGTON, MASSACHUSETTS

BETA JOB NO. 6331
ISSUE DATE 02/05/2021
SHEET NO. 71 OF 92

2/4/2021 2:42 PM O:\6300S\6331 - LEXINGTON CENTER STREETSCAPE\DRAWING FILES\PLANSET\6331 LIGHTING PLAN.DWG (BETA STB BW.STB)


GRAIN MILL ALLEY
(3) 2" NM CONDUITS
(1) 2" WITH 3#8,1#8G GND (LTG CIRCUIT 10)
(1) 2" WITH 3#4,1#4G GND (LTG CIRCUIT 14)
(1) 2" WITH 2#2,1#2 GND (GFI CIRCUIT 11)
(2) 2" NM CONDUITS
(1) 2" WITH 3#4,1#4G GND (LTG CIRCUIT 14)
(1) 2" WITH 2#2,1#2 GND (GFI CIRCUIT 11)
NOTE 11
TYPE B HANDHOLE
SLP1-10
SLP1-18
(1) 2" ?#?, #?G LTG CIRCUIT 10
TYPE B HANDHOLE 11"x18"x12" COMPOSOLITE (TYP)
(1) 2" WITH 3#4,1#4G G LTG CIRCUIT 14
LP #24 TYPE A PANEL SLP1 CIRCUIT 18
LP #26 TYPE A PANEL SLP1 CIRCUIT 18
LP #28 TYPE A PANEL SLP1 CIRCUIT 18
LP #30 TYPE A PANEL SLP1 CIRCUIT 14
OUTLET #5 TYPE 2 PANEL SLP1 CIRCUIT 11
LP #32 TYPE A PANEL SLP1 CIRCUIT 14
LP #34 TYPE A PANEL SLP1 CIRCUIT 14
LP #36 TYPE A PANEL SLP1 CIRCUIT 14
LP #38 TYPE A PANEL SLP1 CIRCUIT 14
OUTLET #7 TYPE 2 PANEL SLP1 CIRCUIT 11
LP #40 TYPE A PANEL SLP1 CIRCUIT 14
LP #42 TYPE A PANEL SLP1 CIRCUIT 14
LP #44 TYPE A PANEL SLP1 CIRCUIT 14
LP #46 TYPE A PANEL SLPC1 CIRCUIT 14
LP #48 TYPE A PANEL SLP1 CIRCUIT 14
CONTINUED ON SHEET NO. 71
CONTINUED ON SHEET NO. 73
16+00
17+00
18+00
19+00
20+00
PC 18+63.5
MASSACHUSETTS AVENUE (ROUTES 4 & 225)
LP #15 TYPE C PANEL SLP1 CIRCUIT 6
OUTLET #14 TYPE 2 PANEL SLP1 CIRCUIT 5
OUTLET #16 TYPE 1 PANEL SLP1 CIRCUIT 5
SLP1-5
LP #17 TYPE B PANEL SLP1 CIRCUIT 6
OUTLET #18 TYPE 1 PANEL SLP1 CIRCUIT 7
OUTLET #20 TYPE 1 PANEL SLP1 CIRCUIT 7
LP #19 TYPE B PANEL SLP1 CIRCUIT 6
OUTLET #22 TYPE 1 PANEL SLP1 CIRCUIT 7
OUTLET #24 TYPE 2 PANEL SLP1 CIRCUIT 7
SLP1-7
LP #21 TYPE B PANEL SLP1 CIRCUIT 6
(1) 2" NM CONDUIT BETWEEN HANDHOLES WITH NO CONDUCTORS
LP #31 TYPE B PANEL SLP2 CIRCUIT 6
OUTLET #32 TYPE 1 PANEL SLP2 CIRCUIT 11
OUTLET #34 TYPE 1 PANEL SLP2 CIRCUIT 11
LP #33 TYPE B PANEL SLP2 CIRCUIT 6
OUTLET #36 TYPE 1 PANEL SLP2 CIRCUIT 11
SLP2-11
SLP2-6
(1) 2" WITH 3#6,1#6 G (LTG CIRCUIT 6)
(3) 2" NM CONDUITS
(1) 2" WITH 3#8,1#8 GND (LTG CIRCUIT 6)
(1) 2" WITH 2#3,1#3 GND (GFI CIRCUIT 7)
(1) 2" WITH 2#1,1#1 GND (GFI CIRCUIT 9)
(2) 2" NM CONDUITS
(1) 2" WITH 3#8,1#8 GND (LTG CIRCUIT 6)
(1) 2" WITH 2#6,1#6 GND (GFI CIRCUIT 9)
(1) 2" WITH 2#1,1#1 G (GFI CIRCUIT 9)
SLP1-6
LP #23 TYPE B PANEL SLP1 CIRCUIT 6
WALTHAM STREET
MATCHLINE A-A
MATCHLINE A-A
VINE BROOK ROAD
N/F 1775 MASS AVE LLC #1779-1789 MASSACHUSETTS AVENUE #3-#9 DEPOT STREET SQUARE MAP/PARCEL: 49/12A
N/F 1775 MASSACHUSETTS AVE. CONDOMINIUM #1775 MASSACHUSETTS AVENUE MAP/PARCEL: 48/97A
N/F HARVARD TRUST COMPANY #1757-1765 MASSACHUSETTS AVENUE MAP/PARCEL: 48/98A
N/F VINEBROOK PARTNERS #1731-1753 MASSACHUSETTS AVENUE MAP/PARCEL: 48/99
N/F RUBIN HOLDINGS LLC #1729 MASSACHUSETTS AVENUE MAP/PARCEL: 48/100
N/F 1709 MASS AVE LLC #1709-1727 MASSACHUSETTS AVENUE MAP/PARCEL: 48/101
1793
1787
1781
1777
1775
1761
1751
1749
1735
1733
1729
1727
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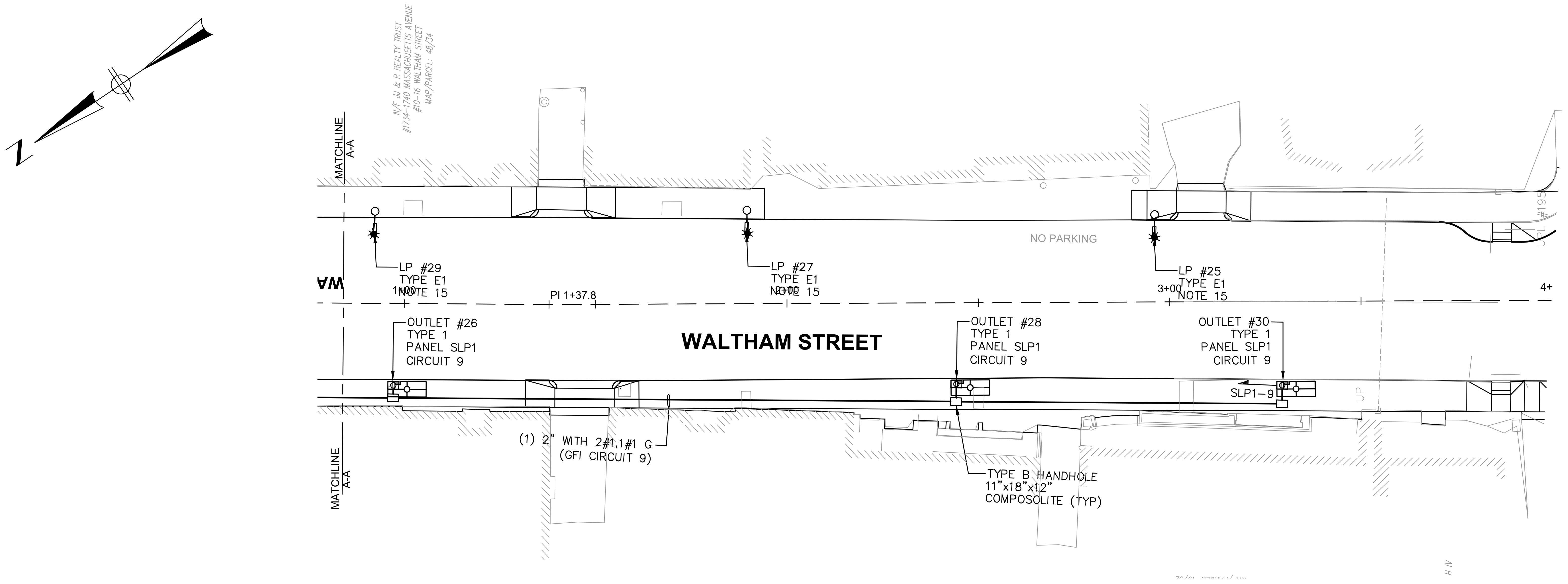
N/F JJ & R REALTY TRUST #1734-1740 MASSACHUSETTS AVENUE #10-16 WALTHAM STREET MAP/PARCEL: 48/24
MATCHLINE A-A
MATCHLINE A-A
NO PARKING
LP #29 TYPE E1 NOTE 15
LP #27 TYPE E1 NOTE 15
LP #25 TYPE E1 NOTE 15
1+00
PI 1+37.8
2+00
3+00
4+
WA
WALTHAM STREET
OUTLET #26 TYPE 1 PANEL SLP1 CIRCUIT 9
OUTLET #28 TYPE 1 PANEL SLP1 CIRCUIT 9
OUTLET #30 TYPE 1 PANEL SLP1 CIRCUIT 9
SLP1-9
(1) 2" WITH 2#1,1#1 G (GFI CIRCUIT 9)
TYPE B HANDHOLE 11"x18"x12" COMPOSOLITE (TYP)

NOTES:

1. REFER TO LIGHTING PLAN SHEET 74 OF 92 FOR ADDITIONAL NOTES

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DESIGNED BY: PMG

CHECKED BY: SA

REGISTERED PROFESSIONAL

M. SALIM AFSAR ELECTRICAL 39063

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TOWN CENTER IMPROVEMENTS

LIGHTING PLAN

LEXINGTON, MASSACHUSETTS

BETA JOB NO. 6331

ISSUE DATE 02/05/2021

SHEET NO. 72 OF 92

N
EDISON WAY
GRANT STREET
MASSACHUSETTS AVENUE
(ROUTES 4 & 225)
WALLIS COURT
CONTINUED ON SHEET NO. 72
CONTINUED ON SHEET NO. 74
(1) 2" NM CONDUIT BETWEEN HANDHOLES WITH NO CONDUCTORS
LP #46 TYPE A PANEL SLPC1 CIRCUIT 14
LP #48 TYPE A PANEL SLP1 CIRCUIT 14
LP #50 TYPE A PANEL SLP1 CIRCUIT 14
LP #52 TYPE A PANEL SLP1 CIRCUIT 14
SLP1–14
LP #54 TYPE E1 NOTE 16
PHONE CHARGING PEDESTAL
(1) 2" WITH 2#8,1#8 G GFI CIRCUIT 23
TYPE B HANDHOLE 11"x18"x12" COMPOSOLITE (TYP)
OUTLET #13 TYPE 3 PANEL SLP2 CIRCUIT 21
OUTLET #9 TYPE 1 PANEL SLP2 CIRCUIT 21
LP #56 TYPE B PANEL SLP2 CIRCUIT 14
LP #58 TYPE A PANEL SLP2 CIRCUIT 14
OUTLET #11 TYPE 1 PANEL SLP2 CIRCUIT 21
LP #60 TYPE C PANEL SLP2 CIRCUIT 14
OUTLET #15 TYPE 1 PANEL SLP2 CIRCUIT 21
(3) 2" NM CONDUITS
(1) 2" WITH 2#4,1#4G GND (GFI CIRCUIT 21)
(1) 2" WITH 2#8,1#8 GND (GFI CIRCUIT 23)
(1) 2" WITH 3#12,1#12 GND (LTG CIRCUIT 14)
(4) 2" NM CONDUITS
(1) 2" WITH 2#8,1#8 GND (GFI CIRCUIT 19)
(1) 2" WITH 2#4,1#4G GND (GFI CIRCUIT 21)
(1) 2" WITH 2#8,1#8 GND (GFI CIRCUIT 23)
(1) 2" WITH 3#12,1#12 GND (LTG CIRCUIT 14)
OUTLET #17 TYPE 1 PANEL SLP2 CIRCUIT 19
OUTLET #21 TYPE 3 PANEL SLP2 CIRCUIT 19
OUTLET #23 TYPE 1 PANEL SLP2 CIRCUIT 17
OUTLET #20 TYPE 3 PANEL SLP2 CIRCUIT 17
LP #62 TYPE C PANEL SLP2 CIRCUIT 14
OUTLET #19 TYPE 1 PANEL SLP2 CIRCUIT 19
LP #64 TYPE A PANEL SLP2 CIRCUIT 14
OUTLET #25 TYPE 1 PANEL SLP2 CIRCUIT 17
LP #66 TYPE C PANEL SLP2 CIRCUIT 14
EXISTING UTILITY MANHOLE
(17) 2" NM CONDUITS
(1) 2" WITH 2#10,1#10 GND (GFI CIRCUIT 3)
(1) 2" WITH 2#10,1#10 GND (GFI CIRCUIT 5)
(1) 2" WITH 2#6,1#6 GND (GFI CIRCUIT 7)
(1) 2" WITH 2#4,1#4 GND (GFI CIRCUIT 9)
(1) 2" WITH 2#3,1#3 GND (GFI CIRCUIT 11)
(1) 2" WITH 2#8,1#8 GND (GFI CIRCUIT 13)
(1) 2" WITH 2#8,1#8 GND (GFI CIRCUIT 15)
(1) 2" WITH 2#10,1#10 GND (GFI CIRCUIT 17)
(1) 2" WITH 2#8,1#8 GND (GFI CIRCUIT 19)
(1) 2" WITH 2#4,1#4G GND (GFI CIRCUIT 21)
(1) 2" WITH 2#8,1#8 GND (GFI CIRCUIT 23)
(1) 2" WITH 3#10,1#10 GND (LTG CIRCUIT 2)
(1) 2" WITH 3#6,1#6 GND (LTG CIRCUIT 6)
(1) 2" WITH 3#12,1#12 GND (LTG CIRCUIT 10)
(1) 2" WITH 3#12,1#12 GND (LTG CIRCUIT 14)
(2) 2" SPARE
(1) 3" NM CONDUIT SEE NOTE 14
PROPOSED ENCLOSURE #2 WITH PANELBOARD SLP2 ON CONCRETE FOUNDATION
TYPE A HANDHOLE
(5) 2" NM CONDUITS
(1) 2" WITH 2#10,1#10 GND (GFI CIRCUIT 17)
(1) 2" WITH 2#8,1#8 GND (GFI CIRCUIT 19)
(1) 2" WITH 2#4,1#4G GND (GFI CIRCUIT 21)
(1) 2" WITH 2#8,1#8 GND (GFI CIRCUIT 23)
(1) 2" WITH 3#12,1#12 GND (LTG CIRCUIT 14)
(3) 2" NM CONDUITS
(1) 2" WITH 2#8,1#8 GND (GFI CI
(1) 2" WITH 2#8,1#8 GND (GFI CI
(1) 2" WITH 3#12,1#12 GND (LTG
TYPE A HANDHOLE
LP #68 TYPE A PANEL SLP2 CIRCUIT 10
OUTLET #2 TYPE 1 PANEL SLP CIRCUIT 1
LP #33 TYPE B PANEL SLP2 CIRCUIT 6
OUTLET #36 TYPE 1 PANEL SLP2 CIRCUIT 11
LP #35 TYPE C PANEL SLP2 CIRCUIT 6
OUTLET #38 TYPE 1 PANEL SLP2 CIRCUIT 9
LP #37 TYPE A PANEL SLP2 CIRCUIT 6
OUTLET #40 TYPE 1 PANEL SLP2 CIRCUIT 9
OUTLET #42 TYPE 1 PANEL SLP2 CIRCUIT 9
LP #39 TYPE C PANEL SLP2 CIRCUIT 6
OUTLET #44 TYPE 1 PANEL SLP2 CIRCUIT 7
OUTLET #46 TYPE 1 PANEL SLP2 CIRCUIT 7
LP #45 TYPE C PANEL SLP2 CIRCUIT 6
OUTLET #48 TYPE 2 PANEL SLP2 CIRCUIT 7
LP #47 TYPE E2 NOTE 16
LP #61 TYPE E2 NOTE 15
LP #65 TYPE A PANEL SLP2 CIRCUIT 6
LP #67 TYPE E2 NOTE 16
TYPE A HANDHOLE 24"x36"x22" COMPOSOLITE (TYP)
SLP2–9
(2) 2" NM CONDUITS
(1) 2" WITH 2#3,1#3 GND (GFI CIRCUIT 11)
(1) 2" WITH 3#6,1#6 GND (LTG CIRCUIT 6)
SLP2–7
LP #41 TYPE A PANEL SLP2 CIRCUIT 6
LP #43 TYPE A PANEL SLP2 CIRCUIT 6
LP #49 TYPE A PANEL SLP2 CIRCUIT 6
LP #59 TYPE A PANEL SLP2 CIRCUIT 6
OUTLET #50 TYPE 3 PANEL SLP2 CIRCUIT 5
OUTLET #52 TYPE 3 PANEL SLP2 CIRCUIT 5
OUTLET #54 TYPE 3 PANEL SLP2 CIRCUIT 3
(1) 2" WITH 2#10,1#10 G GFI CIRCUIT 3
(3) 2" NM CONDUITS
(1) 2" WITH 2#4,1#4 GND (GFI CIRCUIT 9)
(1) 2" WITH 2#3,1#3 GND (GFI CIRCUIT 11)
(1) 2" WITH 3#6,1#6 GND (LTG CIRCUIT 6)
(4) 2" NM CONDUITS
(1) 2" WITH 2#6,1#6 GND (GFI CIRCUIT 7)
(1) 2" WITH 2#4,1#4 GND (GFI CIRCUIT 9)
(1) 2" WITH 2#3,1#3 GND (GFI CIRCUIT 11)
(1) 2" WITH 3#6,1#6 GND (LTG CIRCUIT 6)
LP #57 TYPE A NOTE 17
LP #63 TYPE A NOTE 17
LP #51 TYPE A NOTE 17
LP #53 TYPE A NOTE 17
LP #55 TYPE A NOTE 17
UTILITY POLE 64–124
UTILITY POLE 64–123
UTILITY POLE 64–122
(8) 2" NM CONDUITS
(1) 2" WITH 2#10,1#10 GND (GFI CIRCUIT 5)
(1) 2" WITH 2#6,1#6 GND (GFI CIRCUIT 7)
(1) 2" WITH 2#4,1#4 GND (GFI CIRCUIT 9)
(1) 2" WITH 2#3,1#3 GND (GFI CIRCUIT 11)
(1) 2" WITH 3#6,1#6 GND (LTG CIRCUIT 6)
(8) 2" NM CONDUITS
(1) 2" WITH 2#10,1#10 GND (GFI CIRCUIT 3)
(1) 2" WITH 2#10,1#10 GND (GFI CIRCUIT 5)
(1) 2" WITH 2#6,1#6 GND (GFI CIRCUIT 7)
(1) 2" WITH 2#4,1#4 GND (GFI CIRCUIT 9)
(1) 2" WITH 2#3,1#3 GND (GFI CIRCUIT 11)
(1) 2" WITH 3#6,1#6 GND (LTG CIRCUIT 6)
(1) 2" WITH 3#10,1#10 GND (LTG CIRCUIT 2)
(1) 2" SPARE
20+00
21+00
22+00
23+00
24+00
25+00
26+00
PT 23+39.2
PT 25+78.0
71+00
81+00
100+75
N/F 1709 MASS AVE LLC #1709–1727 MASSACHUSETTS AVENUE MAP/PARCEL: 48/101
N/F BOSTON EDISON COMPANY #4 GRANT STREET MAP/PARCEL: 48/104
4 GRANT ST
N/F UNITED STATES OF AMERICA #1661 MASSACHUSETTS AVENUE MAP/PARCEL: 48/168A
N/F LEXINGTON PLACE CONDOMINIUM #1718–1720 MASSACHUSETTS AVENUE #30–50 WALTHAM STREET MAP/PARCEL: 48/36A
N/F TURTLE BAY LLC #1710 MASSACHUSETTS AVENUE MAP/PARCEL: 48/31
N/F OLD SCHOOLHOUSE TRUST #1654–1656 MASSACHUSETTS AVENUE MAP/PARCEL: 48/28
N/F LEXINGTON SQUARE TRUST #1666–1668 MASSACHUSETTS AVENUE MAP/PARCEL: 48/30A
N/F FED INVESTMENT TRUST NO 1 #1628–1634 MASSACHUSETTS AVENUE MAP/PARCEL: 48/21
N/F #2–4 WALLIS COURT MAP/PARCEL: 48/22
N/F #3 WALLIS COURT MAP/PARCEL: 48/25
1723
1717
1713
1709
1661
1625
1726
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1718
1710
1688
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1628

NOTES:

1. REFER TO LIGHTING PLAN SHEET 74 OF 92 FOR ADDITIONAL NOTES

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CHECKED BY: SA

REGISTERED PROFESSIONAL
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LIGHTING PLAN
LEXINGTON, MASSACHUSETTS

BETA JOB NO. 6331
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SHEET NO. 73 OF 92

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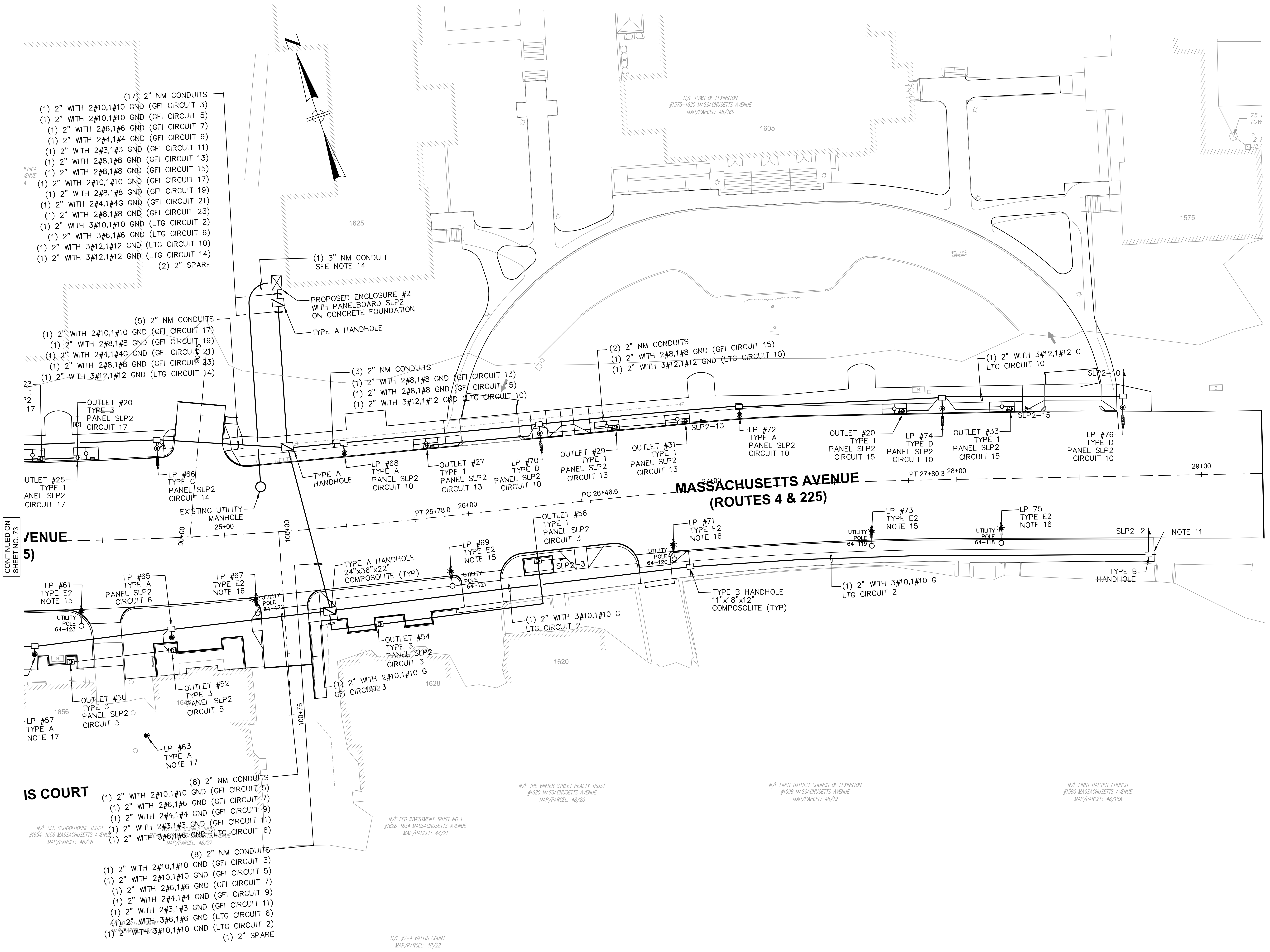

NOTES:

1. ALL WORK SHALL CONFORM TO THE LATEST REVISIONS OF THE NATIONAL ELECTRICAL CODE, THE COMMONWEALTH OF MASSACHUSETTS ROADWAY STANDARDS AND SPECIFICATIONS AND THE REQUIREMENTS FOR THE TOWN OF LEXINGTON.
2. ALL WORK SHALL BE COORDINATED WITH LOCAL PUBLIC UTILITIES. NO WORK SHALL COMMENCE UNTIL THE CONTRACTOR HAS NOTIFIED DIG–SAFE AND ALL EXISTING UTILITIES HAVE BEEN PROPERLY NOTIFIED. CONTRTACTOR SHALL CONFIRM AND VERIFY LOCATION OF ALL EXISTING UTILITIES BEFORE INSTALLATION OF RACEWAY, HANDHOLES, LIGHTING FIXTURES AND POLE BASES. ANY DAMAGE TO THE UTILITIES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
3. UNLESS NOTED OTHERWISE, ALL RACEWAY CONDUITS SHALL BE 2" PVC SCHEDULE 80 NM (NON–METALLIC). INSTALL NYLON PULL STRING IN ALL SPARE CONDUITS FOR FUTURE USE. SERVICE CONDUIT FROM UTILITY POWER SOURCE SHALL BE 3" PVC SCHED 80.
4. ALL RACEWAY SHALL BE INSTALLED AT A MIN DEPTH OF 30", UNLESS DIRECTED BY THE ENGINEER. WHEN MULTIPLE CONDUITS ARE INSTALLED IN THE SAME TRENCH THE CONTRACTOR SHALL INSTALL RACEWAY SPACES AS INCIDENTAL TO THE WORK. ALL RACEWAY CROSSING ROAD SHALL BE ENCASED IN CONCRETE.
5. PROVIDE LUG/CONDUCTOR REDUCERS, IN–LINE FUSE SPLICE KITS AND TERMINATING STUDS AS REQUIRED.
6. CONTRACTOR SHALL COORDINATE AND CONFIRM WITH UTILITY FOR COLD/HOT SEQUENCE METERING REQUIREMENTS.
7. CONTRACTOR SHALL PROVIDE ENOUGH SLACK (CABLE) AT THE HANDHOLES AND PULLBOXES TO ALLOW FOR SPLICING AND REPAIRS TO BE MADE.
8. CONTRACTOR SHALL FURNISH AND INSTALL INDUSTRUCTIBLE, NUMBERING, PLASTIC TAGS ON ALL CIRCUITS AT ALL HANDHOLES AS PER CIRCUITS NOTED ON PLANS.
9. PRIOR TO REMOVING ANY EXISTING ELECTRICAL WIRING AND RACEWAY, CONTRACTOR SHALL CONFIRM AND COORDINATE WITH TOWN OF LEXINGTON THE EXISTING WIRING & RACEWAY THAT FEEDS ANY EXISTING ELECTRICAL DEVICES OUTSIDE OF PROJECT SCOPE. ALL EXISTING DEVICES, OUTSIDE OF PROJECT SCOPE, SHALL REMAIN ACTIVE DURING AND AFTER COMPLETION OF PROJECT.
10. CONTRACTOR SHALL CONFIRM AND COORDINATE REMOVAL OF ALL EXISTING LIGHTING FIXTURE POLES AND LUMINARES, WITHIN THE PROJECT LIMITS, WITH THE TOWN OF LEXINGTON PUBLIC WORKS DEPARTMENT. CONTRACTOR SHALL STOCKPILE AS DIRECTED.
11. RECESSED HANDHOLE FOR FUTURE WORK. CONFIRM EXACT LOCATION WITH SITE CIVIL ENGINEER. HANDHOLE SHALL HAVE (1) DEDICATED 20A, 2P, 240V CIRCUIT TERMINATED IN WEATHERPROOF JUNCTION BOX, WITHIN HANDHOLE, FOR FUTURE WORK. CONTRACTOR SHALL ALSO INSTALL (1) 2" NM CONDUIT 12" LONG STUB OUT FROM HANDHOLE TO ALLOW FOR FUTURE CONNECTION.
12. ALL CIRCUITS SERVING GFCI SITE RECEPTACLES AT TREE WELLS AND PLANTER/BENCHES SHALL BE CONTROLLED VIA TIM CLOCK. ALL LIGHTING CIRCUITS SHALL BE WIRED TO PANEL AND CONTROLLED VIA PLUG–IN WIRELESS NODE MOUNTED TO LUMINAIRE.
13. ALL CONDUIT LOCATIONS ARE SHOWN TO ILLUSTRATE PROPOSED LAYOUTS AND CONNECTIONS. NO CONDUITS SHALL BE INSTALLED BENEATH PLANTING AREAS OR TREE PITS UNLESS APPROVED BY THE ENGINEER.
14. CONTRACTOR SHALL FURNISH AND INSTALL (1) NEW, 3", NM RACEWAY WITH PULLSTRING FROM NEW ENCLOSURE TO EXISTING UTILITY POWER SOURCE. CONTRACTOR SHALL CONFIRM AND COORDINATE LOCATION OF FEED, CONDUCTORS REQUIRED, AND RACEWAY MATERIAL WITH LOCAL UTILITY COMPANY.
15. ELECTRICAL CONTRACTOR SHALL REPLACE IN KIND EXISTING UTILITY POLE MOUNTED LIGHTING FIXTURE WITH NEW LUMINAIRE. CONTRACTOR SHALL WIRE NEW LUMINAIRE TO EXISTING LUMINAIRE POWER CIRCUIT. CONFIRM LUMINAIRE CONTROL WITH LIGHTING SUB–CONSULTANT AND LUMINAIRE MANUFACTURER. CONFIRM LUMINARE MOUNTING HEIGHTS WITH LIGHTING SUB–CONSULTANT AND ENGINEER.
16. ELECTRICAL CONTRACTOR SHALL FURNISH AND INSTALL NEW LIGHTING LUMINAIRE ON EXISTING STREET UTILITY POLE. CONTRACTOR SHALL FURNISH AND INSTALL NEW, OVERHEAD WIRING FROM NEAREST, EXISTING UTILITY POLE (WITH EXISTING STREET LIGHTING) TO NEW LUMINAIRE. FIELD VERIFY AND CONFIRM OVERHEAD WIRING LENGTHS. CONFIRM METHOD OF SUSPENSION WITH LEXINGTON DEPARTMENT OF PUBLIC WORKS. MATCH IN KIND ELECTRICAL CHARACHTERISTICTS OF EXISTING OVERHEAD WIRING CURRENTLY FEEDING NEAREST EXISTING UTILITY POLE MOUNTED FIXTURES. NEW FIXTURES SHALL BE POWERED FROM NEAREST EXISTING UTILITY POLE LIGHTING CIRCUIT. CONFIRM LUMINAIRE CONTROL WITH LIGHTING SUB–CONSULTANT AND LUMINAIRE MANUFACTURER. CONFIRM LUMINAIRE MOUNTING HEIGHTS WITH LIGHTING SUB–CONSULTANT AND ENGINEER.
17. ELECTRICAL CONTRACTOR SHALL REPLACE IN KIND EXISTING SITE POLE LIGHTING FIXTURE WITH NEW FIXTURE AS NOTED. CONTRACTOR SHALL WIRE NEW FIXTURE TO EXISTING FIXTURE POWER AND CONTROL CIRCUIT. IF EXISTING FIXTURE IS CONTROLLED BY INTEGRAL PHOTOCELL, CONTRACTOR SHALL FURNISH AND INSTALL NEW FIXTURE WITH INTEGRAL PHOTOCELL OPTION. CONFIRM REMOVAL, INSTALLATION, AND EXACT LOCATION WITH SITE CIVIL ENGINEER AND LIGHTING SUB–CONSULTANT. UNLESS DIRECTED BY LANSCAPE ARCHITECT, THIS FIXTURE SHALL NOT BE CONTROLLED VIA CITY TOUCH NODE.

EXTERIOR OUTLET LEGEND:

TYPE 1	EXTERIOR GRADE, RECESSED, LOCKABLE, RECEPTACLE POWER OUTLET ENCLOSURE. LEGRAND: XB814C515BK SERIES. CONFIRM COLOR, MOUNTING, AND EXACT LOCATIONS WITH ENGINEER.
TYPE 2	EXTERIOR GRADE, SINGLE GANG, NEMA 5–15R RECEPTACLE WITH EXTRA DUTY, DIE–CAST, WEATHERPROOF ENCLOSURE. ENCLOUSRE SHALL MAINTAIN WEATHERPROOF RATING WHILE IN–USE. LEGRAND: WP1010HMXD SERIES. CONFIRM QUANTITY, MOUNTING, AND EXACT LOCATIONS WITH ENGINEER.
TYPE 3	EXTERIOR GRADE, SINGLE GANG, NEMA 5–15R RECEPTACLE WITH EXTRA DUTY, DIE–CAST, WEATHERPROOF ENCLOSURE. ENCLOUSRE SHALL MAINTAIN WEATHERPROOF RATING WHILE IN–USE. LEGRAND: WP1010HMXD SERIES. CONFIRM QUANTITY, EXACT LOCATIONS, MOUNTING AND RECEPTACLE SUPPORT WITH ENGINEER.

EXTERIOR OUTLET NOTES:

1. ALL EXTERIOR RECEPTACLES SHALL BE PROTECTED BY A GROUND FAULT CIRCUIT BREAKER INSTALLED WITHIN NEW SITE PANELS.

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LIGHTING PLAN
LEXINGTON, MASSACHUSETTS

BETA JOB NO. 6331
ISSUE DATE 02/05/2021
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LIGHTING FIXTURE SCHEDULE

TYPE	DESCRIPTION	MANUFACTURER & CATALOG NUMBER	LAMPS		INPUT		REMARKS
			NUMBER	TYPE	VOLTS	WATTS	
A	SINGLE HEAD LED LIGHTING FIXTURE	SPRING CITY: DULUTH STYLE ALMDTINSV14SDLE040 EVXHC127CR3YSDPTR7 PCU	1	LED	240	40	CONFIRM CATALOG NUMBER AND ALL ASSOCIATED ACCESSORIES INCLUDING POLE & BRACKETS WITH LIGHTING SUB–CONSULTANT AND LANDSCAPE ARCHITECT
B	SINGLE HEAD LED LIGHTING FIXTURE	LUMEC: ULM100160W96LED3K G2LEXUNVDMGRCD7 BKTX	1	LED	240	160	CONFIRM CATALOG NUMBER AND ALL ASSOCIATED ACCESSORIES INCLUDING POLE & BRACKETS WITH LIGHTING SUB–CONSULTANT AND LANDSCAPE ARCHITECT
C	SINGLE HEAD LED LIGHTING FIXTURE WITH LED FLOOD LIGHT	LUMEC: ULM100160W96LED3K LEXUNVDMGRCD7027 BKTX ULFL10000955W32LED 3KG2RMUNVDMGFAWS BKTX	2	LED	240	215	CONFIRM CATALOG NUMBER AND ALL ASSOCIATED ACCESSORIES INCLUDING POLE & BRACKETS WITH LIGHTING SUB–CONSULTANT AND LANDSCAPE ARCHITECT
D	SINGLE HEAD LED LIGHTING FIXTURE	LUMEC: ULM100100W64LED3K G2LE3UNVDMGRCD7BKTX	1	LED	240	215	CONFIRM CATALOG NUMBER AND ALL ASSOCIATED ACCESSORIES INCLUDING POLE & BRACKETS WITH LIGHTING SUB–CONSULTANT AND LANDSCAPE ARCHITECT
E1	SINGLE HEAD LIGHTING LED LUMINAIRE TO BE MOUNTED ON EXISTING UTILITY POLE	LUMEC: ULM100160W96LED3K G2LE3UNVDMGRCD7 BKTX	1	LED	240	160	CONFIRM CATALOG NUMBER AND ALL ASSOCIATED ACCESSORIES INCLUDING POLE & BRACKETS WITH LIGHTING SUB–CONSULTANT AND LANDSCAPE ARCHITECT
E2	SINGLE HEAD LIGHTING LED LUMINAIRE TO BE MOUNTED ON EXISTING UTILITY POLE	LUMEC: ULM100100W64LED3K G2LE3UNVDMGRCD7 BKTX	1	LED	240	100	CONFIRM CATALOG NUMBER AND ALL ASSOCIATED ACCESSORIES INCLUDING POLE & BRACKETS WITH LIGHTING SUB–CONSULTANT AND LANDSCAPE ARCHITECT
F	SINGLE HEAD LED LIGHTING FIXTURE	HOUSTON: ALMHSTLE020EVX BL127CR5GSCDC	1	LED	240	20	CONFIRM CATALOG NUMBER AND ALL ASSOCIATED ACCESSORIES INCLUDING POLE & BRACKETS WITH LIGHTING SUB–CONSULTANT AND LANDSCAPE ARCHITECT

FIXTURE SCHEDULE NOTES:

1. ELECTRICAL CONTRACTOR SHALL CONFIRM FIXTURE, POLE BASE AND COVER COLOR/FINISH WITH LANDSCAPE ARCHITECT & LIGHTING SUB CONSULTANT.
2. CONTRACTOR SHALL CONFIRM QUANTITY, MOUNTING, MOUNTING HEIGHTS, AND EXACT LOCATION OF ALL FIXTURES WITH LANDSCAPE ARCHITECT.
3. CONTRACTOR SHALL FURNISH AND SUPPLY 15A, TAMPER AND WEATHER RESISTANT GFCI RECESSED RECEPTACLE: COOPER #TWRVGF15 WITH WEATHERPROOF, LOCKABLE ALUMINUM COVER – TAYMAC #MX4280S. CONFIRM LOCATION AND QUANTITY OF RECEPTACLES WITH LANDSCAPE ARCHITECT AND LIGHTING SUB–CONSULTANT

LOAD CENTER PANEL SCHEDULE – SLP1

PHASE: 1 WIRES: 3 VOLTAGE: 120/240 MAINS: 100A MCB

CIRCUIT	BREAKER			DESCRIPTION OF LOAD	CABLE	CONDUIT	COMMENTS
	FRAME	POLES(N–NEUTRAL)	TRIP				
M	100	2P	100	MAIN CIRCUIT BREAKER	3W#3 AWG & #1 GND	(1) 3" NM SCH 80	
1	20	1P	20	SPARE	–	–	–
3	20	1P	20	SITE RECEPTACLES	2#6,1#6 GND	(1) 2" NM SCH 80	GFCI BREAKER
5	20	1P	20	SITE RECEPTACLES	2#4,1#4 GND	(1) 2" NM SCH 80	GFCI BREAKER
7	20	1P	20	SITE RECEPTACLES	2#3,1#3 GND	(1) 2" NM SCH 80	GFCI BREAKER
9	20	1P	20	SITE RECEPTACLES	2#1,1#1 GND	(1) 2" NM SCH 80	GFCI BREAKER
11	20	1P	20	SITE RECEPTACLES	2#6,1#6 GND	(1) 2" NM SCH 80	GFCI BREAKER
13	20	1P	20	RECEPTACLE IN CABINET	2#12,1#12 GND	(1) 3/4" EMT	GFCI BREAKER
15	20	1P	20	ON/OFF/AUTO CONTROL IN CABINET	2#12,1#12 GND	(1) 3/4" EMT	
17	20	1P	20	TIMECLOCK IN CABINET	2#12,1#12 GND	(1) 3/4" EMT	
2/4	20	2P	20	LIGHTING CIRCUIT #1	3#12,1#12 GND	(1) 2" NM SCH 80	
6/8	20	2P	20	LIGHTING CIRCUIT #2	3#8,1#8 GND	(1) 2" NM SCH 80	
10/12	20	2P	20	LIGHTING CIRCUIT #3	3#8,1#8 GND	(1) 2" NM SCH 80	
14/16	20	2P	20	LIGHTING CIRCUIT #4	3#4,1#4 GND	(1) 2" NM SCH 80	
18/20	20	2P	20	LIGHTING CIRCUIT #5	3#6,1#6 GND	(1) 2" NM SCH 80	

SCHEDULE NOTES:

1. ALL BREAKERS SERVING 120V GFI SITE RECEPTACLES SHALL BE CONTROLLED VIA NEW TIMECLOCK
2. ALL LIGHTING CIRCUITS SHALL NOT BE CONTROLLED VIA TIMECLOCK AND WIRED DIRECTLY TO PANEL. FIXTURES SHALL BE CONTROLLED VIA PLUG–IN WIRELESS NODE WITH PHOTOCELL.

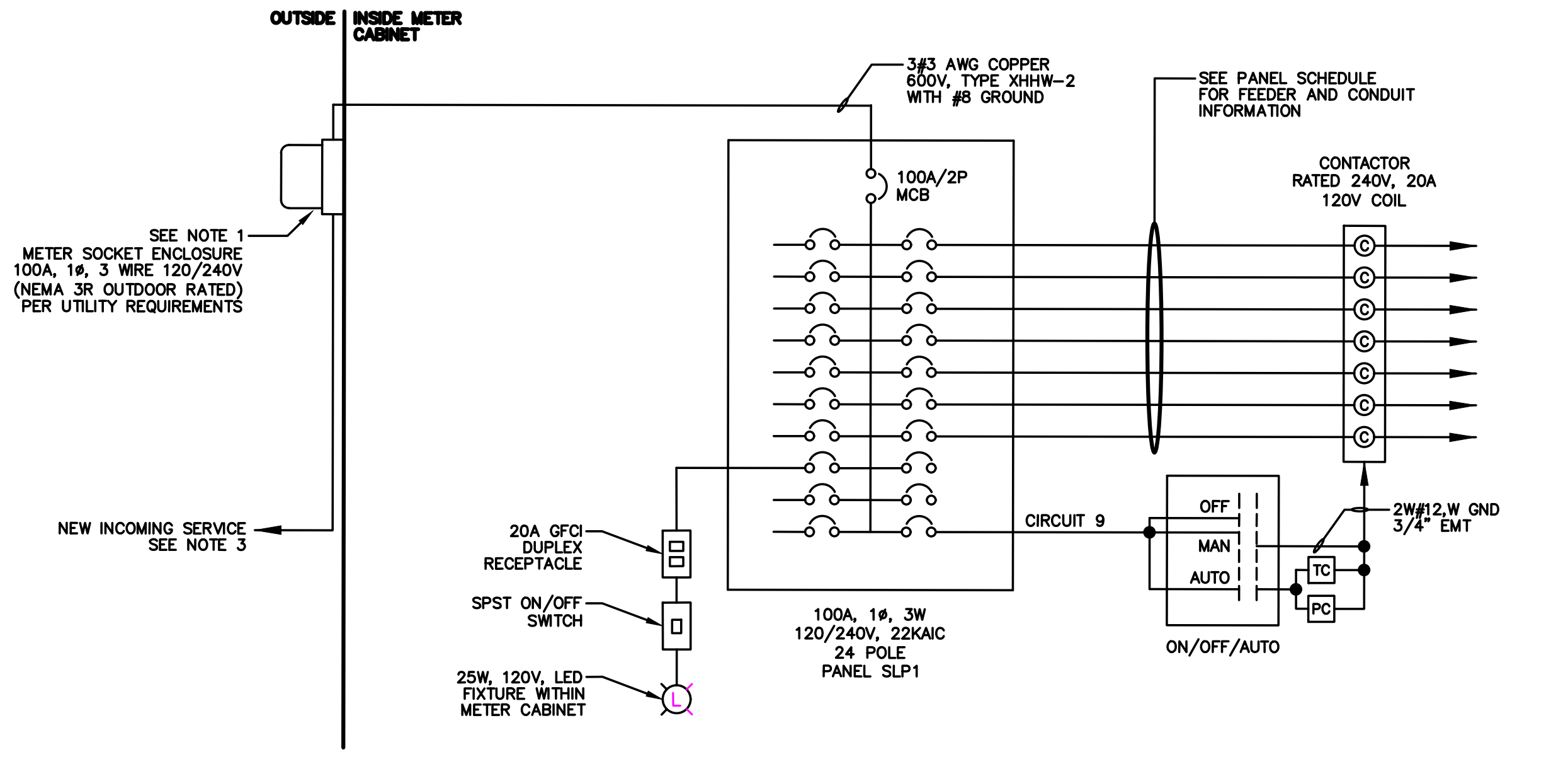
LOAD CENTER PANEL SCHEDULE – SLP2

PHASE: 1 WIRES: 3 VOLTAGE: 120/240 MAINS: 100A MCB

CIRCUIT	BREAKER			DESCRIPTION OF LOAD	CABLE	CONDUIT	COMMENTS
	FRAME	POLES(N–NEUTRAL)	TRIP				
M	100	2P	100	MAIN CIRCUIT BREAKER	3W#3 AWG & #1 GND	(1) 3" NM SCH 80	
1	20	1P	20	SPARE	–	–	–
3	20	1P	20	SITE RECEPTACLES	2#10,1#10 GND	(1) 2" NM SCH 80	GFCI BREAKER
5	20	1P	20	SITE RECEPTACLES	2#10,1#10 GND	(1) 2" NM SCH 80	GFCI BREAKER
7	20	1P	20	SITE RECEPTACLES	2#6,1#6 GND	(1) 2" NM SCH 80	GFCI BREAKER
9	20	1P	20	SITE RECEPTACLES	2#4,1#4 GND	(1) 2" NM SCH 80	GFCI BREAKER
11	20	1P	20	SITE RECEPTACLES	2#3,1#3 GND	(1) 2" NM SCH 80	GFCI BREAKER
13	20	1P	20	SITE RECEPTACLES	2#8,1#8 GND	(1) 2" NM SCH 80	GFCI BREAKER
15	20	1P	20	SITE RECEPTACLES	2#8,1#8 GND	(1) 2" NM SCH 80	GFCI BREAKER
17	20	1P	20	SITE RECEPTACLES	2#10,1#10 GND	(1) 2" NM SCH 80	GFCI BREAKER
19	20	1P	20	SITE RECEPTACLES	2#8,1#8 GND	(1) 2" NM SCH 80	GFCI BREAKER
21	20	1P	20	SITE RECEPTACLES	2#4,1#4 GND	(1) 2" NM SCH 80	GFCI BREAKER
23	20	1P	20	CHARGING STATION	2#8,1#8 GND	(1) 2" NM SCH 80	GFCI BREAKER
25	20	1P	20	RECEPTACLE IN CABINET	2#12,1#12 GND	(1) 3/4" EMT	GFCI BREAKER
27	20	1P	20	ON/OFF/AUTO CONTROL IN CABINET	2#12,1#12 GND	(1) 3/4" EMT	
29	20	1P	20	TIMECLOCK IN CABINET	2#12,1#12 GND	(1) 3/4" EMT	
2/4	20	2P	20	LIGHTING CIRCUIT #1	3#10,1#10 GND	(1) 2" NM SCH 80	
6/8	20	2P	20	LIGHTING CIRCUIT #2	3#6,1#6 GND	(1) 2" NM SCH 80	
10/12	20	2P	20	LIGHTING CIRCUIT #3	3#12,1#12 GND	(1) 2" NM SCH 80	
14/16	20	2P	20	LIGHTING CIRCUIT #4	3#12,1#12 GND	(1) 2" NM SCH 80	

SCHEDULE NOTES:

1. ALL BREAKERS SERVING 120V GFI SITE RECEPTACLES AND CHARGING STATION SHALL BE CONTROLLED VIA NEW TIMECLOCK
2. ALL LIGHTING CIRCUITS SHALL NOT BE CONTROLLED VIA TIMECLOCK AND WIRED DIRECTLY TO PANEL. FIXTURES SHALL BE CONTROLLED VIA PLUG–IN WIRELESS NODE WITH PHOTOCELL.

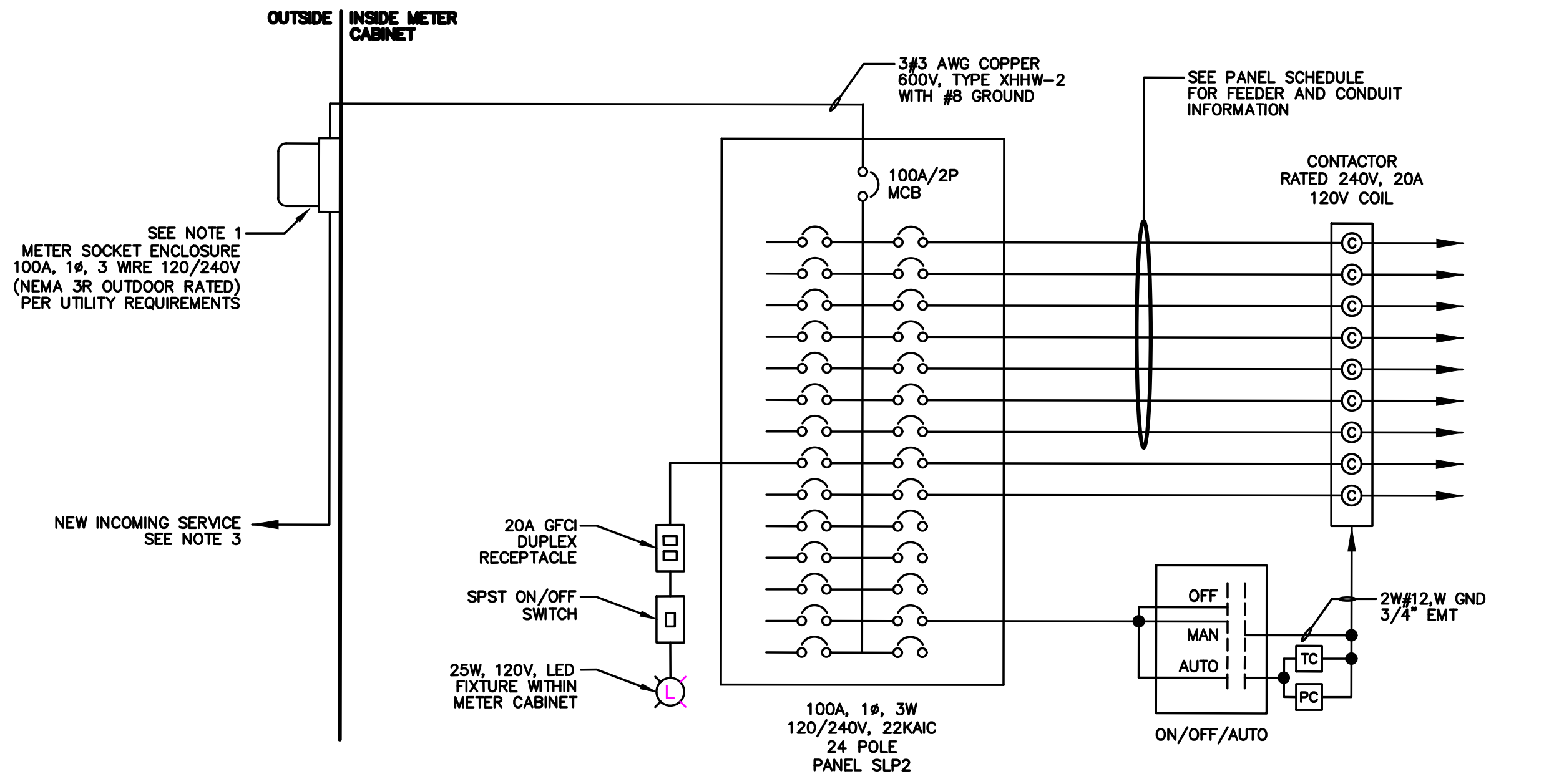

OUTSIDE
INSIDE METER CABINET
3#3 AWG COPPER 600V, TYPE XHHW–2 WITH #8 GROUND
SEE PANEL SCHEDULE FOR FEEDER AND CONDUIT INFORMATION
CONTACTOR RATED 240V, 20A 120V COIL
100A/2P MCB
SEE NOTE 1
METER SOCKET ENCLOSURE 100A, 1ø, 3 WIRE 120/240V (NEMA 3R OUTDOOR RATED) PER UTILITY REQUIREMENTS
NEW INCOMING SERVICE SEE NOTE 3
CIRCUIT 9
OFF
MAN
AUTO
TC
PC
2W#12,W GND 3/4" EMT
20A GFCI DUPLEX RECEPTACLE
SPST ON/OFF SWITCH
25W, 120V, LED FIXTURE WITHIN METER CABINET
L
100A, 1ø, 3W 120/240V, 22KAIC 24 POLE PANEL SLP1
ON/OFF/AUTO

1 SLPC1 Load Center Riser Detail

Scale: None

NOTES:

1. CONFIRM AND COORDINATE WITH UTILITY COMAPNY FOR HOT OR COLD SEQUENCING. CONFIRM MEANS OF DISCONNECT WITH UTILITY COMAPNY AND TOWN OF LEXINGTON. FURNISH AND INSTALL ANY AND ALL ELECTRICAL BREAKERS, DEVICES, WIRE, AND RACEWAY TO COMPLETE INSTALLATION.
2. 365 DAY, PROGRAMMABLE, ASTRONOMICAL TIME CLOCK CONTROLLER/RELAY (TORK OR EQUAL) WITH MOMENTARY OVERRIDE SWITCH. FURNISH AND INSTALL REMOTE PHOTOCELL. CONFIRM MOUNTING AND LOCATION OF PHOTOCELL WITH ENGINEER AND TOWN OF LEXINGTON. CONTRACTOR SHALL CONFIRM AND COORDINATE PROGRAMMING OF TIMECLOCK/CONTROLLER WITH TOWN OF LEXINGTON.
3. NEW INCOMING ELECTRICAL SERVICE FROM EXISTING LOCAL UTILITY MANHOLE. CONTRACTOR SHALL FURNISH AND INSTALL (1) 3" NM RACEWAY AND PULL STRING FROM EXISTING MANHOLE TO NEW ENCLOSURE. CONFIRM ROUTING WITH ENGINEER AND LOCATION OF EXISTING MANHOLE WITH NEAREST AVAILABLE 120/240V, 1 ø SERVICE WITH UTILITY COMPANY. CONFIRM AND COORDINATE METERING WITH LOCAL UTILITIES.


OUTSIDE
INSIDE METER CABINET
3#3 AWG COPPER 600V, TYPE XHHW–2 WITH #8 GROUND
SEE PANEL SCHEDULE FOR FEEDER AND CONDUIT INFORMATION
CONTACTOR RATED 240V, 20A 120V COIL
100A/2P MCB
SEE NOTE 1
METER SOCKET ENCLOSURE 100A, 1ø, 3 WIRE 120/240V (NEMA 3R OUTDOOR RATED) PER UTILITY REQUIREMENTS
NEW INCOMING SERVICE SEE NOTE 3
OFF
MAN
AUTO
TC
PC
2W#12,W GND 3/4" EMT
20A GFCI DUPLEX RECEPTACLE
SPST ON/OFF SWITCH
25W, 120V, LED FIXTURE WITHIN METER CABINET
L
100A, 1ø, 3W 120/240V, 22KAIC 24 POLE PANEL SLP2
ON/OFF/AUTO

2 SLPC2 Load Center Riser Detail

Scale: None

NOTES:

1. CONFIRM AND COORDINATE WITH UTILITY COMAPNY FOR HOT OR COLD SEQUENCING. CONFIRM MEANS OF DISCONNECT WITH UTILITY COMAPNY AND TOWN OF LEXINGTON. FURNISH AND INSTALL ANY AND ALL ELECTRICAL BREAKERS, DEVICES, WIRE, AND RACEWAY TO COMPLETE INSTALLATION.
2. 365 DAY, PROGRAMMABLE, ASTRONOMICAL TIME CLOCK CONTROLLER/RELAY (TORK OR EQUAL) WITH MOMENTARY OVERRIDE SWITCH. FURNISH AND INSTALL REMOTE PHOTOCELL. CONFIRM MOUNTING AND LOCATION OF PHOTOCELL WITH ENGINEER AND TOWN OF LEXINGTON. CONTRACTOR SHALL CONFIRM AND COORDINATE PROGRAMMING OF TIMECLOCK/CONTROLLER WITH TOWN OF LEXINGTON.
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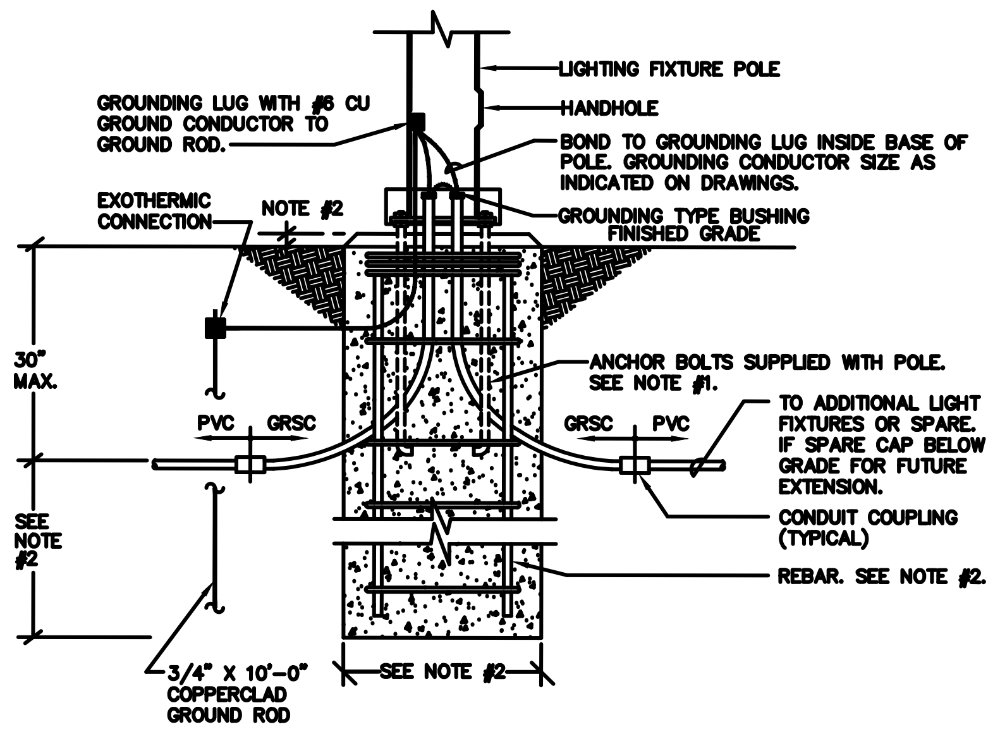
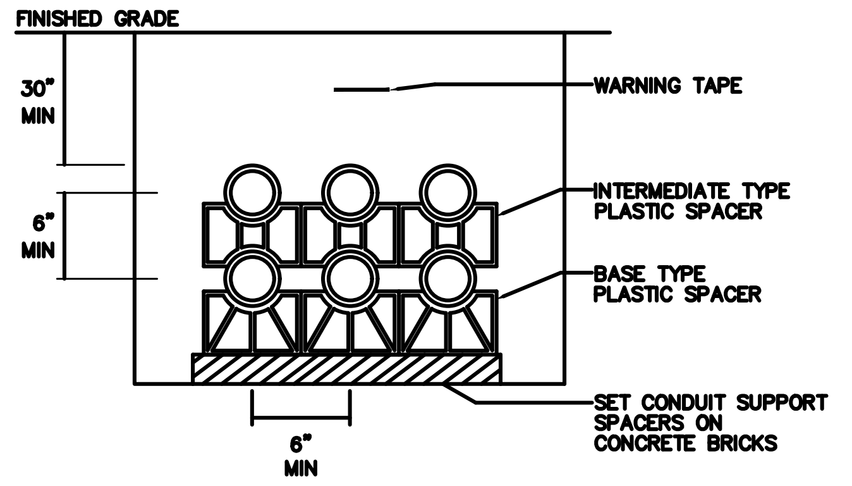

LIGHTING FIXTURE POLE
HANDHOLE
GROUNDING LUG WITH #6 CU GROUND CONDUCTOR TO GROUND ROD.
BOND TO GROUNDING LUG INSIDE BASE OF POLE. GROUNDING CONDUCTOR SIZE AS INDICATED ON DRAWINGS.
EXOTHERMIC CONNECTION
NOTE #2
GROUNDING TYPE BUSHING
FINISHED GRADE
30" MAX.
ANCHOR BOLTS SUPPLIED WITH POLE. SEE NOTE #1.
PVC
GRSC
GRSC
PVC
TO ADDITIONAL LIGHT FIXTURES OR SPARE. IF SPARE CAP BELOW GRADE FOR FUTURE EXTENSION.
CONDUIT COUPLING (TYPICAL)
SEE NOTE #2
REBAR. SEE NOTE #2.
3/4" X 10'–0" COPPERCLAD GROUND ROD
SEE NOTE #2

NOTES:

1. BOLT PATTERN SHOWN IS TYPICAL AND NOT FOR CONSTRUCTION. CONTRACTOR SHALL PROVIDE BOLT PATTERN DETAILS BASED ON SELECTED MANUFACTURER.
2. REFER TO SHOP DRAWINGS FOR POLE BASE HEIGHT, SIZE AND REBAR REQUIREMENTS.
3. COORDINATE EXACT ANCHOR BOLT REQUIREMENTS WITH LIGHTING MANUFACTURER AND SHOP DRAWINGS.

3 Site Lighting Pole Base Detail

Scale: None

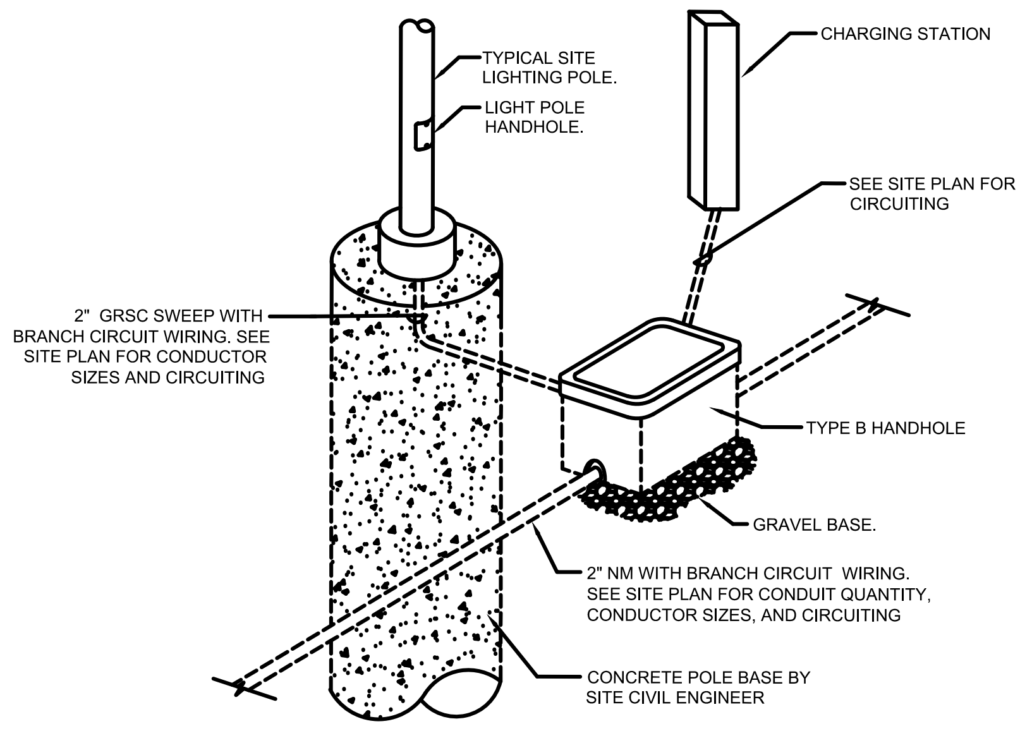

FINISHED GRADE
30" MIN
6" MIN
WARNING TAPE
INTERMEDIATE TYPE PLASTIC SPACER
BASE TYPE PLASTIC SPACER
SET CONDUIT SUPPORT SPACERS ON CONCRETE BRICKS
6" MIN

NOTES:

1. ALL RACEWAY CROSSING STREETS SHALL BE ENCASED IN CONCRETE.

7 Typical Conduit Section Detail

Scale: None

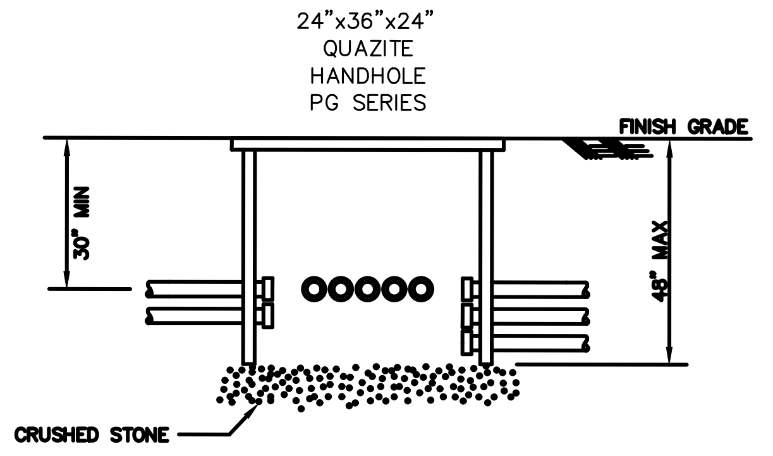

TYPICAL SITE LIGHTING POLE.
LIGHT POLE HANDHOLE.
CHARGING STATION
SEE SITE PLAN FOR CIRCUITING
2" GRSC SWEEP WITH BRANCH CIRCUIT WIRING. SEE SITE PLAN FOR CONDUCTOR SIZES AND CIRCUITING
TYPE B HANDHOLE
GRAVEL BASE.
2" NM WITH BRANCH CIRCUIT WIRING. SEE SITE PLAN FOR CONDUIT QUANTITY, CONDUCTOR SIZES, AND CIRCUITING
CONCRETE POLE BASE BY SITE CIVIL ENGINEER

NOTES:

1. INSTALLATION TYPICAL FOR LANDSCAPED OR PAVED SIDEWALK AREAS. HANDHOLE SHALL NOT BE LOCATED IN TRAFFIC AREAS. COORDINATE COVER AND FRAME COLOR OF HANDHOLE WITH ARCHITECT.
2. PROVIDE IN-LINE, WATERPROOF FUSE HOLDER-BUSS "TRON", TYPE HEB OR HEX, AS REQUIRED.
3. REFER TO TYPICAL LIGHT POLE BASE DETAIL.
4. PROVIDE LUG / CONDUCTOR REDUCERS AS REQUIRED

4 Lighting/Irrigation Pedestal Handhole Detail

Scale: None

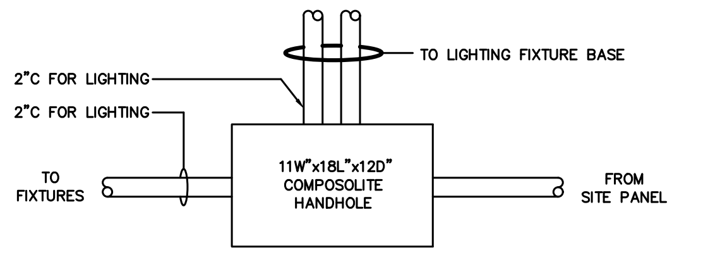


NOTES:

1. CONTRACTOR SHALL CONFIRM LOCATION AND INSTALLATION OF NEW HANDHOLE WITH LANDSCAPE ENGINEER.

5 Type A Handhole

Scale: None



NOTES:

1. CONTRACTOR SHALL CONFIRM LOCATION AND INSTALLATION OF NEW HANDHOLE WITH LANDSCAPE ENGINEER.

6 Type B Handhole

Scale: None

NUMBER	DATE	MADE BY	CHECKED BY	REVISIONS

DRAWN BY: PMG
DESIGNED BY: PMG
CHECKED BY: SA

REGISTERED PROFESSIONAL
M. SALIM AFSAR ELECTRICAL No. 39083

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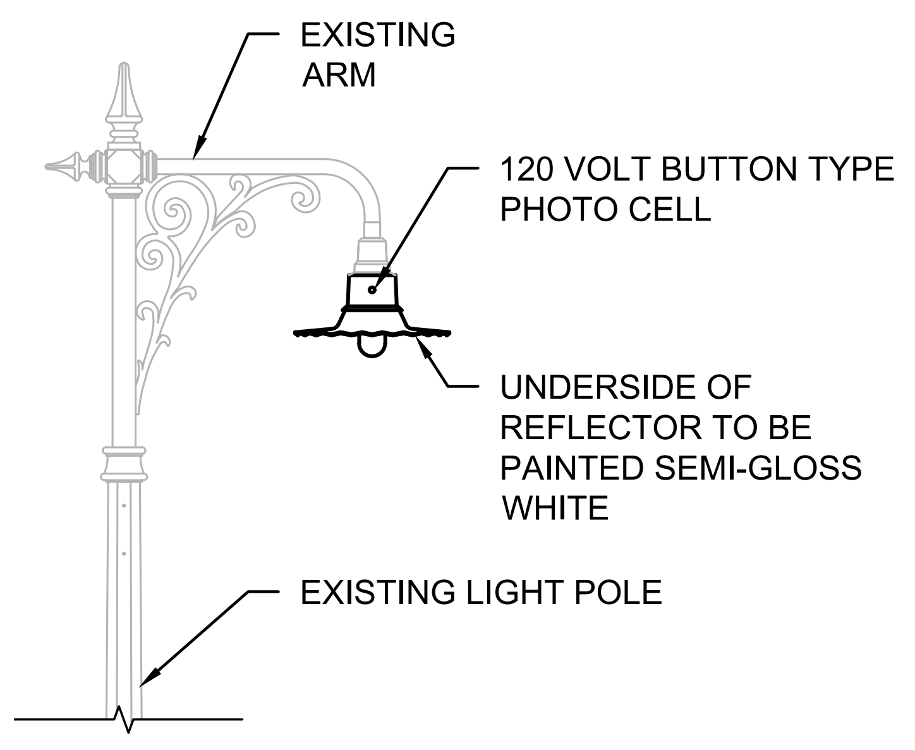
Pawtucket, RI 02860

SCALE
20 0 20 40
SCALE IN FEET: 1"=20'

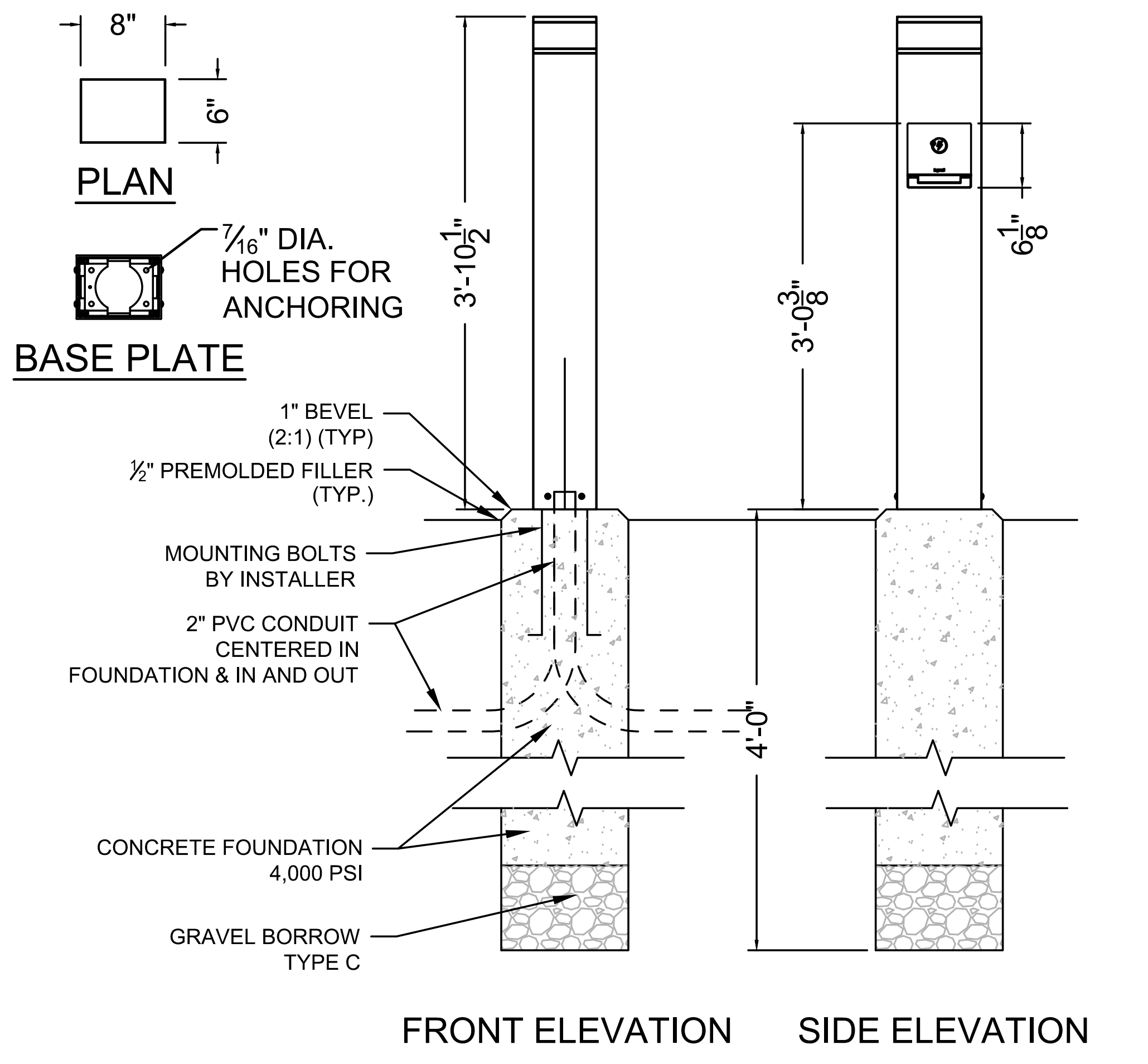
TITLE
TOWN CENTER IMPROVEMENTS
LIGHTING DETAILS
LEXINGTON, MASSACHUSETTS

BETA JOB NO. 6331
ISSUE DATE 01/21/2021
SHEET NO. 75 OF 92


EXISTING ARM
120 VOLT BUTTON TYPE PHOTO CELL
UNDERSIDE OF REFLECTOR TO BE PAINTED SEMI-GLOSS WHITE
EXISTING LIGHT POLE

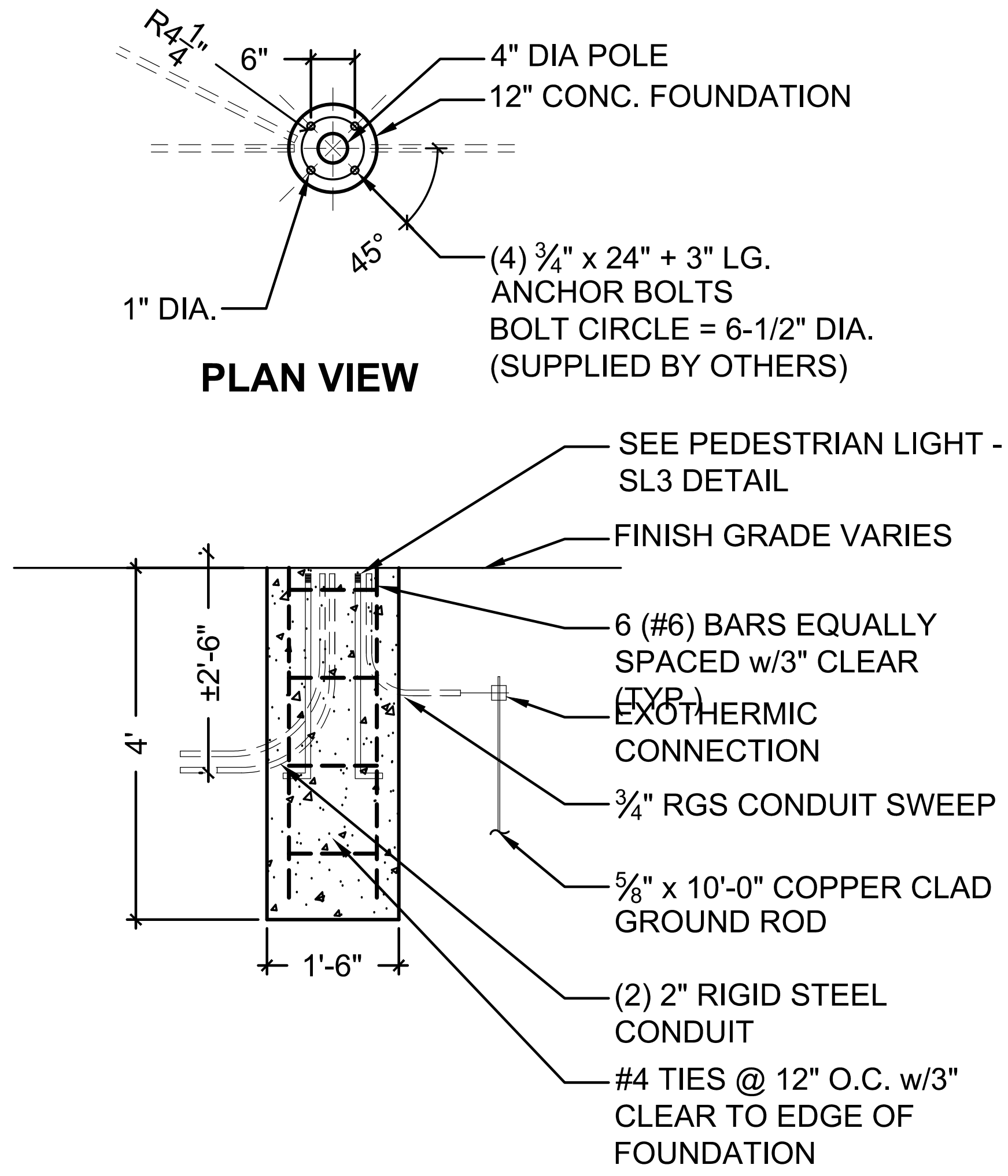
LIGHTING FIXTURE - TYPE F

SCALE: ½"=1'-0"


8"
6"
PLAN
7/16" DIA. HOLES FOR ANCHORING
BASE PLATE
1" BEVEL (2:1) (TYP)
½" PREMOLDED FILLER (TYP.)
MOUNTING BOLTS BY INSTALLER
2" PVC CONDUIT CENTERED IN FOUNDATION & IN AND OUT
CONCRETE FOUNDATION 4,000 PSI
GRAVEL BORROW TYPE C
3'-10½"
3'-0⅜"
6⅛"
4'-0"
FRONT ELEVATION
SIDE ELEVATION

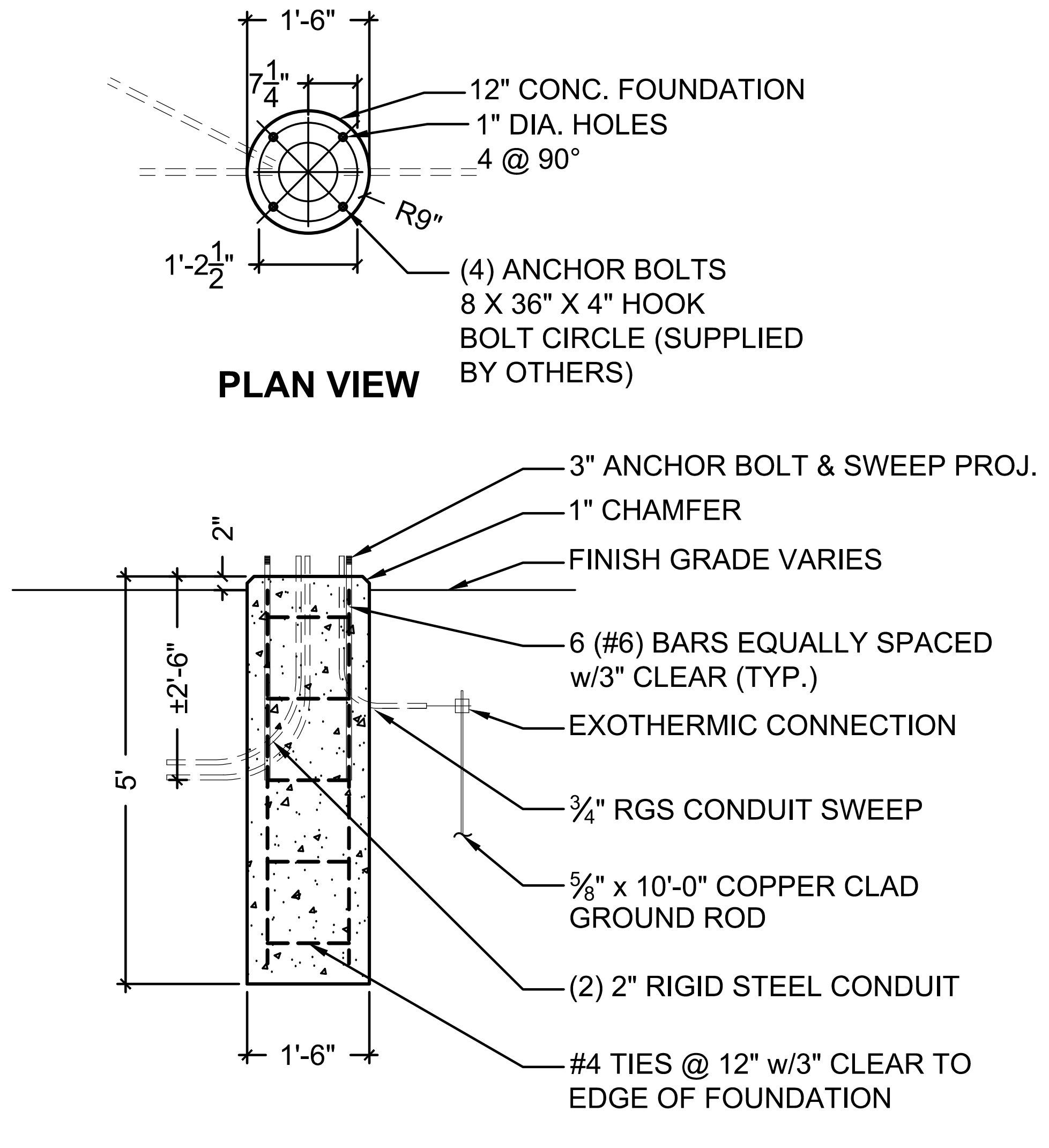
CELL PHONE CHARGING STATION w/ ACCENT LIGHT

SCALE: ¾" = 1'-0"


R4¼"
6"
4" DIA POLE
12" CONC. FOUNDATION
45°
1" DIA.
(4) ¾" x 24" + 3" LG. ANCHOR BOLTS BOLT CIRCLE = 6-1/2" DIA. (SUPPLIED BY OTHERS)
PLAN VIEW
SEE PEDESTRIAN LIGHT - SL3 DETAIL
FINISH GRADE VARIES
6 (#6) BARS EQUALLY SPACED w/3" CLEAR (TYP.)
EXOTHERMIC CONNECTION
¾" RGS CONDUIT SWEEP
⅝" x 10'-0" COPPER CLAD GROUND ROD
(2) 2" RIGID STEEL CONDUIT
#4 TIES @ 12" O.C. w/3" CLEAR TO EDGE OF FOUNDATION
±2'-6"
4'
1'-6"
ELEVATION

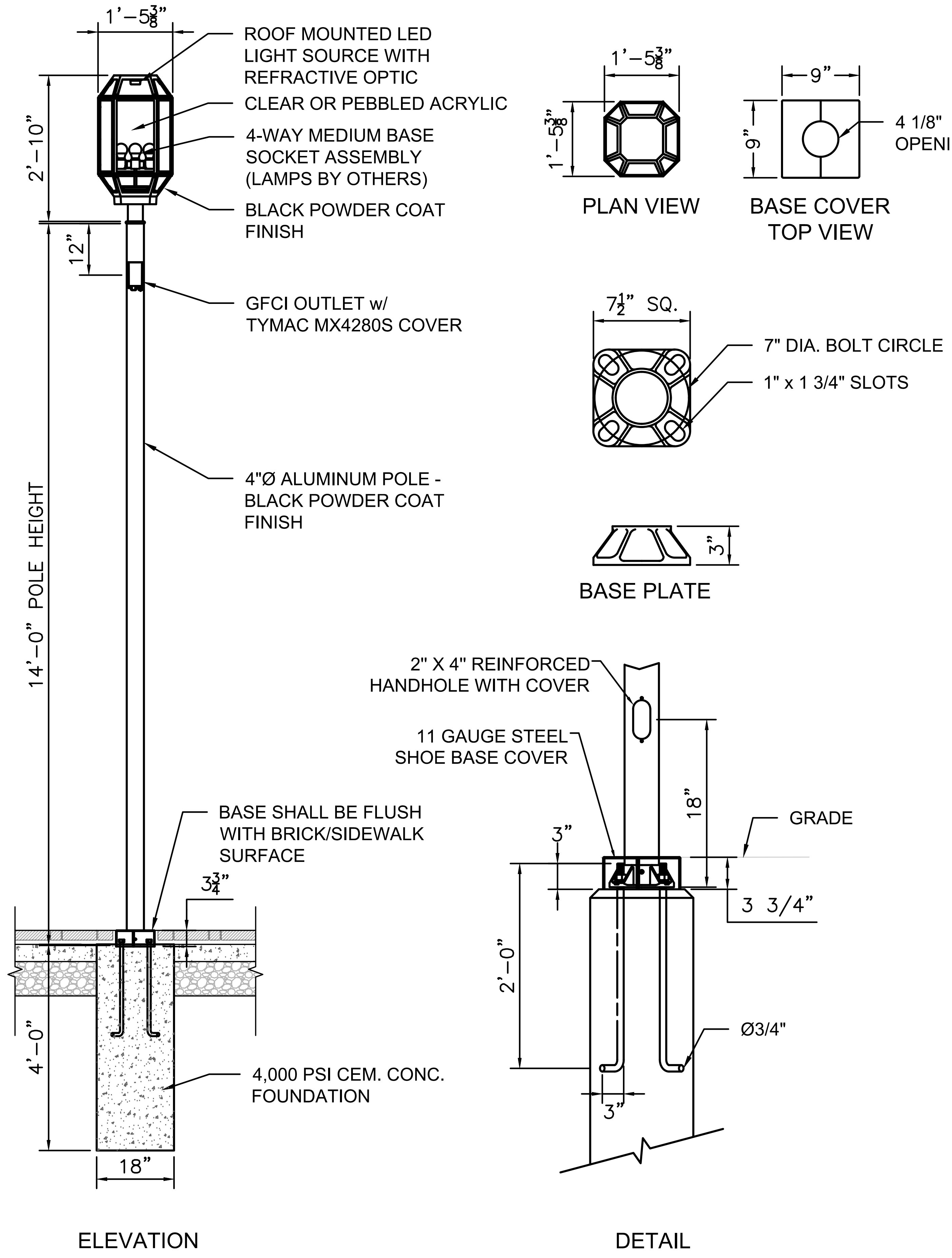
LIGHTING FIXTURE - TYPE A FOUNDATION

SCALE: ½"=1'-0"


1'-6"
7¼"
12" CONC. FOUNDATION
1" DIA. HOLES
4 @ 90°
R9"
1'-2½"
(4) ANCHOR BOLTS 8 X 36" X 4" HOOK BOLT CIRCLE (SUPPLIED BY OTHERS)
PLAN VIEW
3" ANCHOR BOLT & SWEEP PROJ.
1" CHAMFER
FINISH GRADE VARIES
6 (#6) BARS EQUALLY SPACED w/3" CLEAR (TYP.)
EXOTHERMIC CONNECTION
¾" RGS CONDUIT SWEEP
⅝" x 10'-0" COPPER CLAD GROUND ROD
(2) 2" RIGID STEEL CONDUIT
#4 TIES @ 12" w/3" CLEAR TO EDGE OF FOUNDATION
2"
±2'-6"
5'
1'-6"
ELEVATION

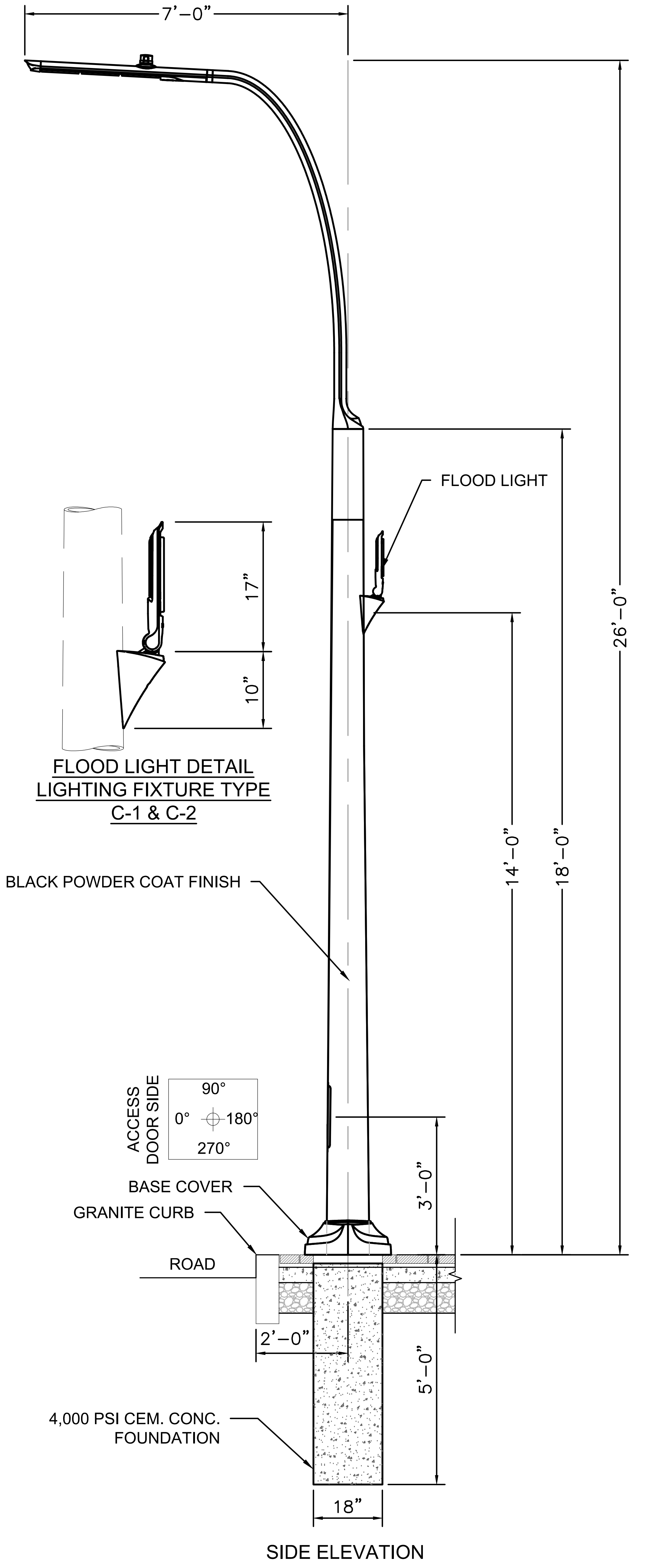
LIGHTING FIXTURE - TYPE B-C-D FOUNDATION

SCALE: ½"=1'-0"


1'-5⅜"
ROOF MOUNTED LED LIGHT SOURCE WITH REFRACTIVE OPTIC
CLEAR OR PEBBLED ACRYLIC
4-WAY MEDIUM BASE SOCKET ASSEMBLY (LAMPS BY OTHERS)
BLACK POWDER COAT FINISH
2'-10"
12"
GFCI OUTLET w/ TYMAC MX4280S COVER
4"Ø ALUMINUM POLE - BLACK POWDER COAT FINISH
14'-0" POLE HEIGHT
BASE SHALL BE FLUSH WITH BRICK/SIDEWALK SURFACE
3¾"
4'-0"
4,000 PSI CEM. CONC. FOUNDATION
18"
ELEVATION
1'-5⅜"
1'-5⅜"
PLAN VIEW
9"
9"
4 1/8" OPENING
BASE COVER TOP VIEW
7½" SQ.
7" DIA. BOLT CIRCLE
1" x 1 3/4" SLOTS
3"
BASE PLATE
2" X 4" REINFORCED HANDHOLE WITH COVER
11 GAUGE STEEL SHOE BASE COVER
18"
GRADE
3"
3 3/4"
2'-0"
Ø3/4"
3"
DETAIL

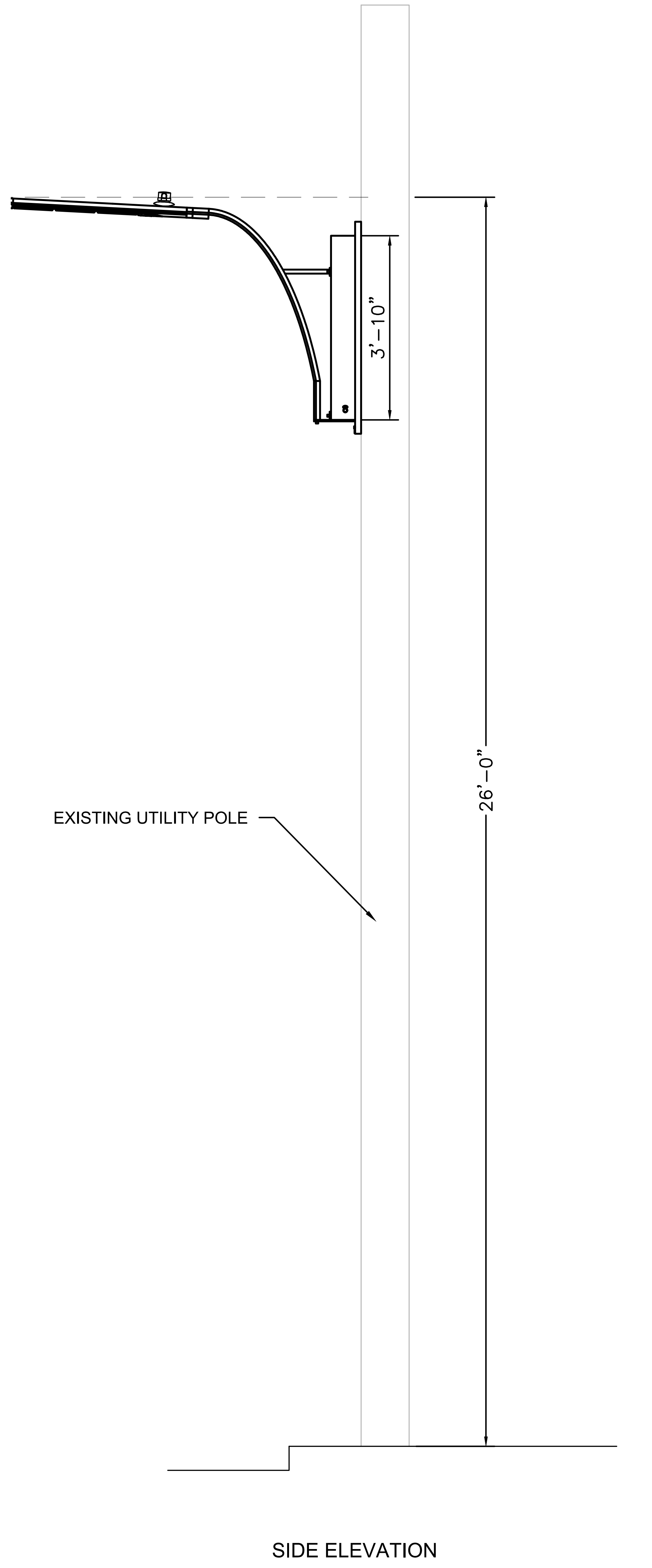
LIGHTING FIXTURE - TYPE A 70W - 14 FOOT POLE

SCALE: ½"=1'-0"



LIGHTING FIXTURE - TYPE B - C - D 26 FOOT POLE

SCALE: ½"=1'-0"



LIGHTING FIXTURE - TYPE E ON UTILITY POLE

SCALE: ½"=1'-0"

NUMBER	DATE	MADE BY	CHECKED BY	REVISIONS

DRAWN BY: AP
DESIGNED BY: KC
CHECKED BY: DJ

REGISTERED PROFESSIONAL
M. SALIM AFSAR ELECTRICAL No. 39083

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TITLE
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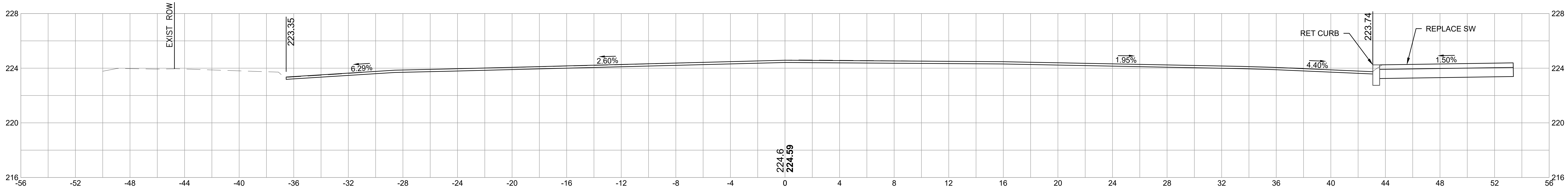
LIGHTING DETAILS
LEXINGTON, MASSACHUSETTS

BETA JOB NO. 6331
ISSUE DATE 02/05/2021
SHEET NO. 76 OF 92

2/8/2021 12:35 PM O:\6300s\6331 - LEXINGTON CENTER STREETSCAPE\DRAWING FILES\PLANSET\6331 SITE DETAILS.DWG (BETA STB BW.STB)

10+38



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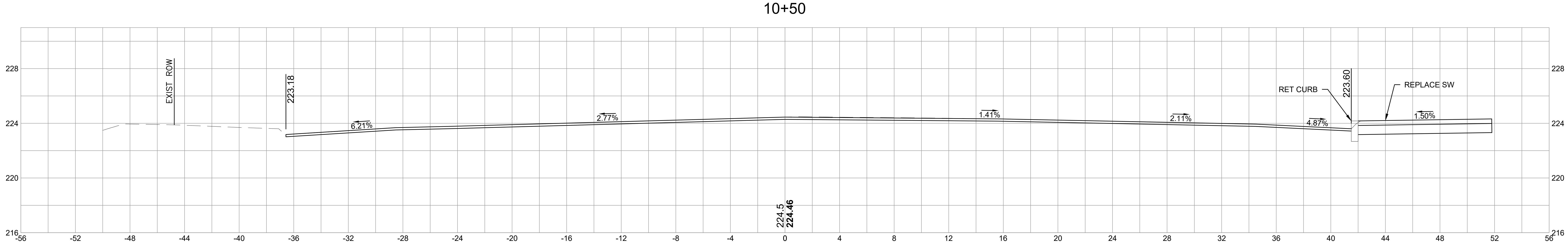
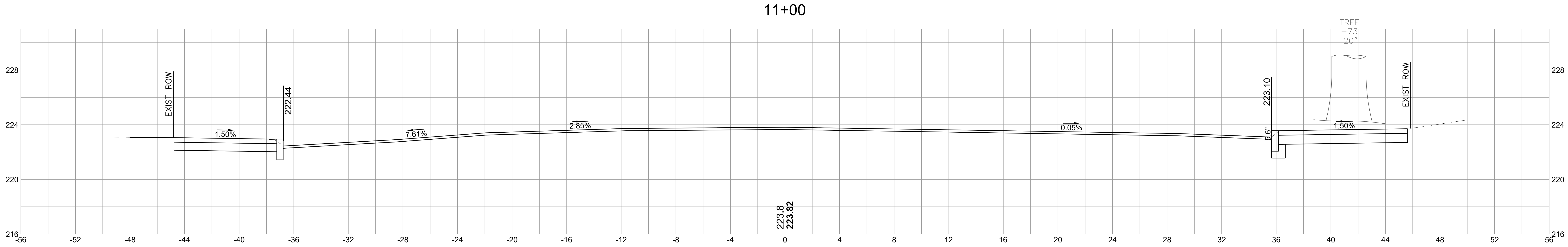


11+00



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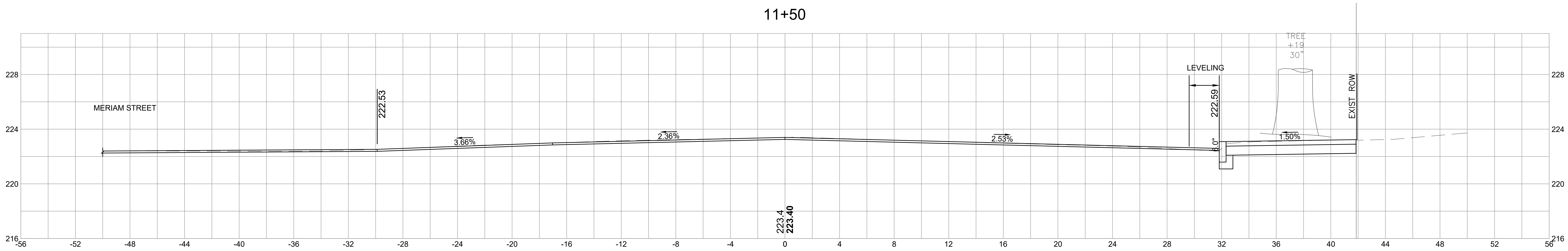

NUMBER	DATE	MADE BY	CHECKED BY	REVISIONS

DRAWN BY:
KY DW

DESIGNED BY:
KY

CHECKED BY:
DJ

REGISTERED PROFESSIONAL
KIEN Y. HO
CIVIL ENGINEER
Kien Ho
2/8/21

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TITLE
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CROSS SECTIONS
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LEXINGTON, MASSACHUSETTS

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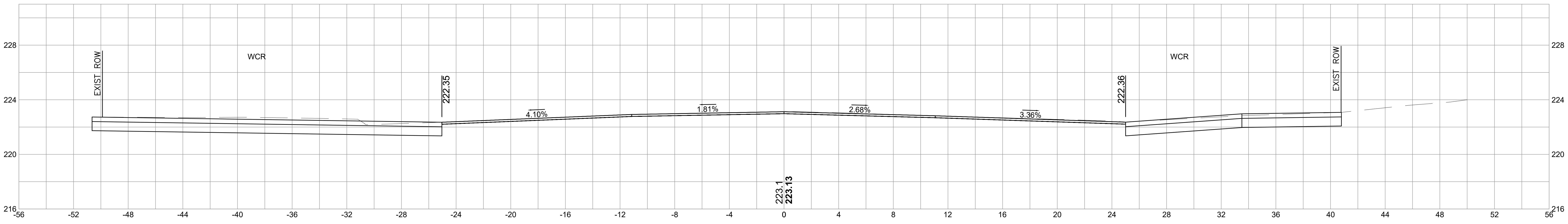
SHEET NO. 77 OF 92

2/8/2021 12:36 PM O:\6300S\6331 - LEXINGTON CENTER STREETSCAPE\DRAWING FILES\PLANSET\6331 XSECTIONS.DWG (BETA STB BW.STB)

11+75



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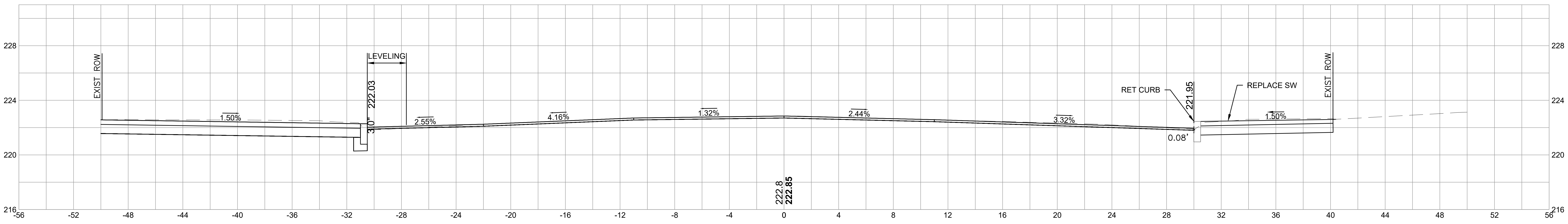

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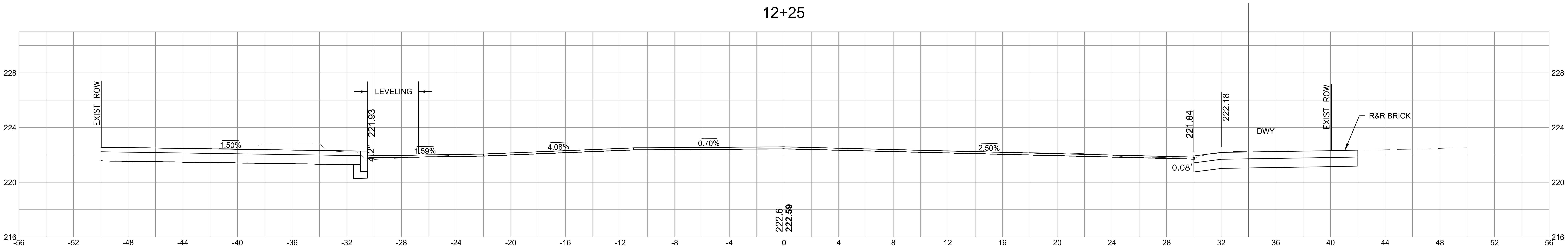

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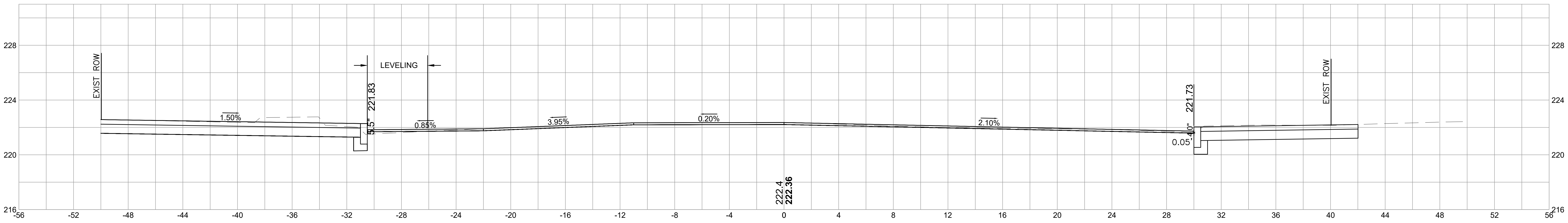

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NUMBER	DATE	MADE BY	CHECKED BY	REVISIONS

DRAWN BY: KY DW

DESIGNED BY: KY

CHECKED BY: DJ

REGISTERED PROFESSIONAL

KIEN Y. HO CIVIL ENGINEER No. 46731

2/8/21

PREPARED BY

BETA
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SUBCONSULTANT

SCALE

4 0 4 8
SCALE IN FEET: 1"=4'
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TITLE

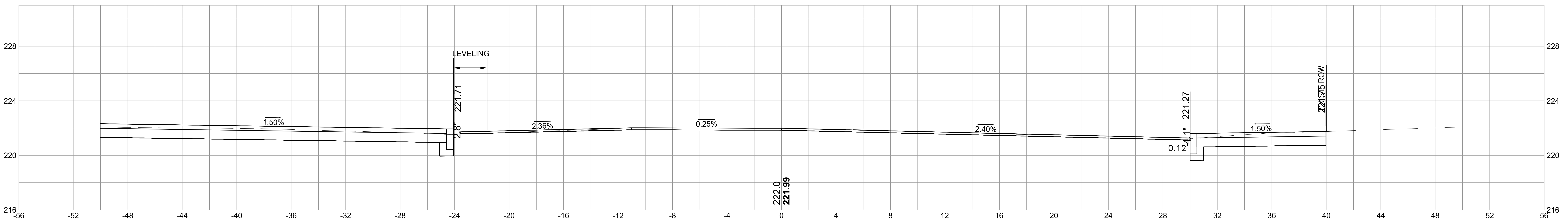
TOWN CENTER IMPROVEMENTS
CROSS SECTIONS
MASSACHUSETTS AVENUE
LEXINGTON, MASSACHUSETTS

BETA JOB NO. 6331

ISSUE DATE 02/05/2021

SHEET NO. 78 OF 92

13+00



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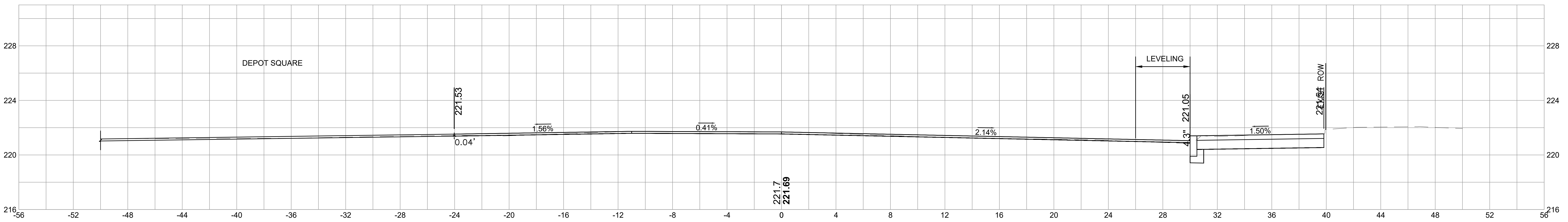

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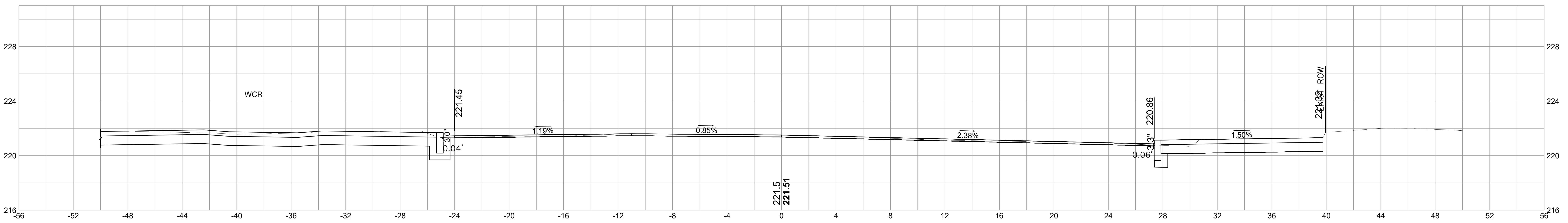

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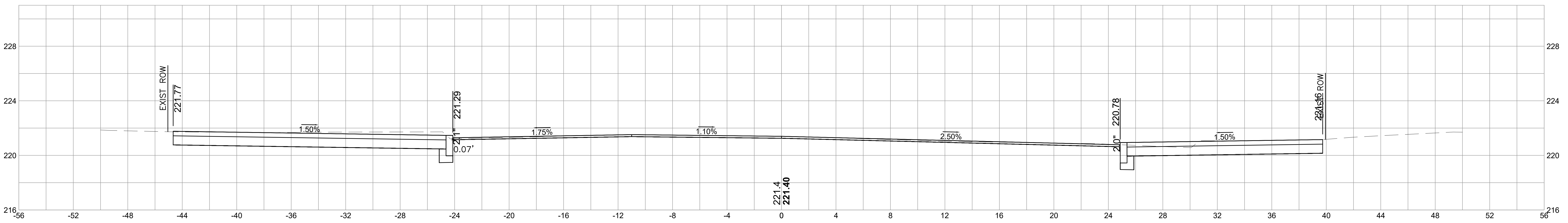

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KIEN Y. HO
CIVIL ENGINEER
2/8/21

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MASSACHUSETTS AVENUE
LEXINGTON, MASSACHUSETTS

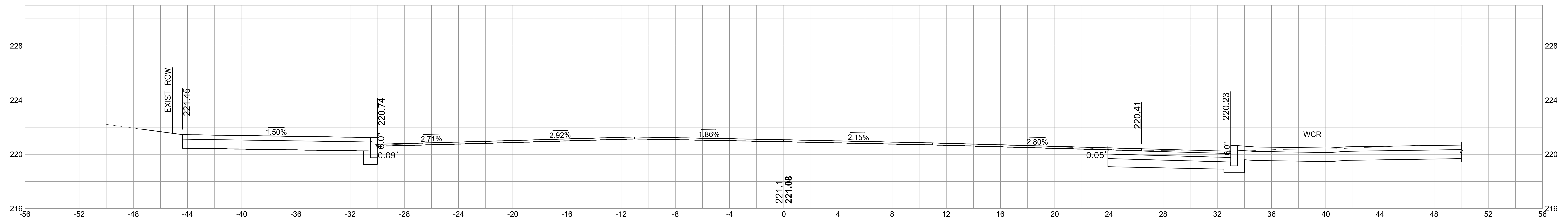
BETA JOB NO. 6331

ISSUE DATE 02/05/2021

SHEET NO. 79 OF 92

2/8/2021 12:36 PM O:\6300S\6331 - LEXINGTON CENTER STREETSCAPE\DRAWING FILES\PLANSET\6331 XSECTIONS.DWG (BETA STB BW.STB)

14+00



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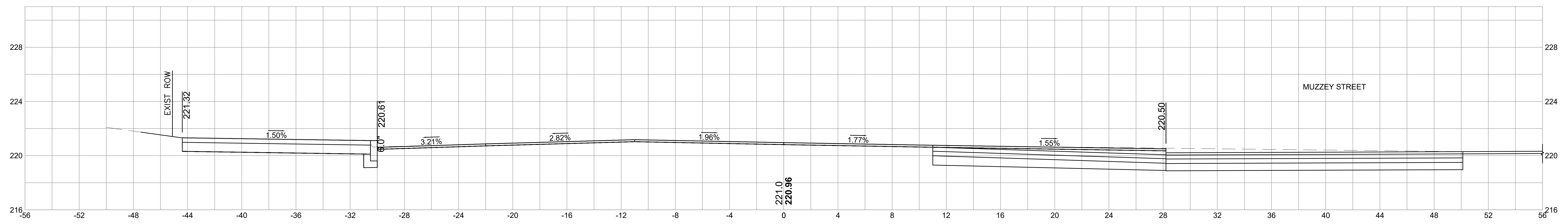

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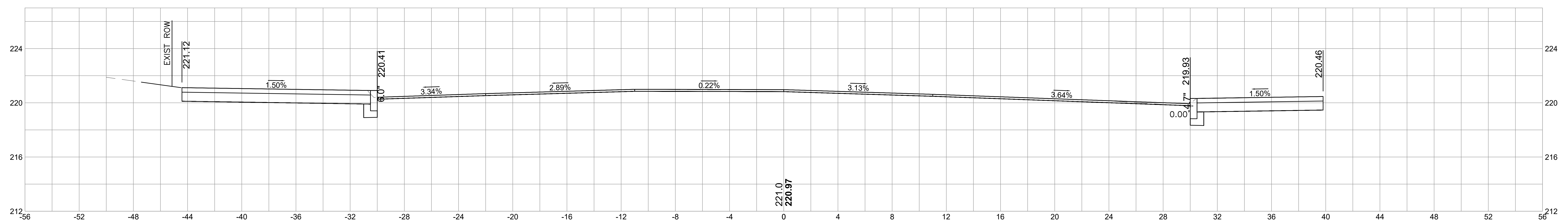

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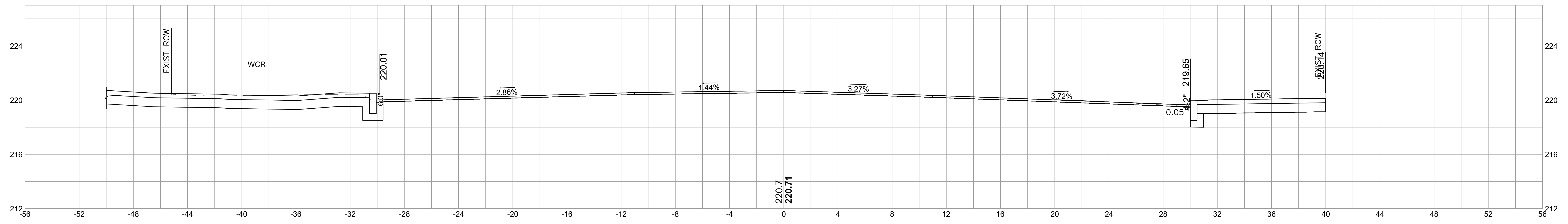

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MASSACHUSETTS AVENUE
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BETA JOB NO. 6331

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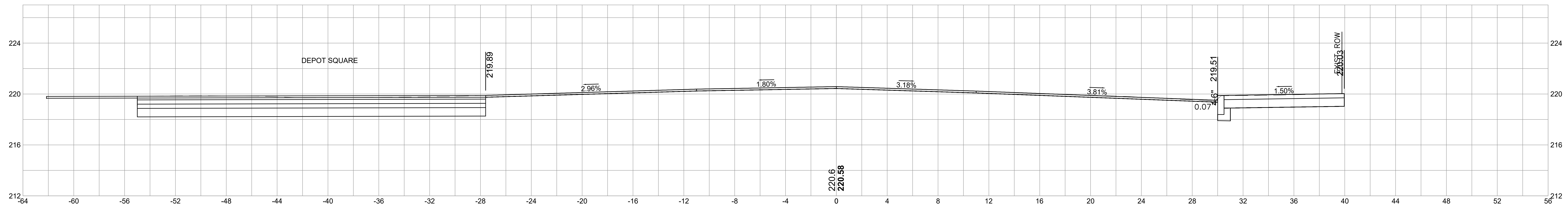
SHEET NO. 80 OF 92

15+20



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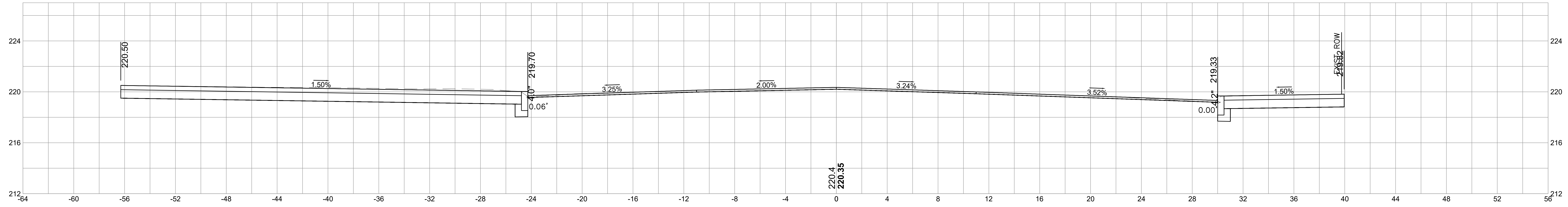

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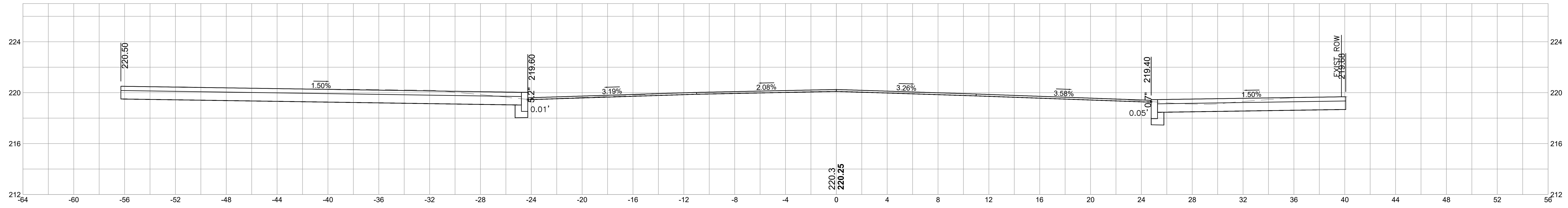

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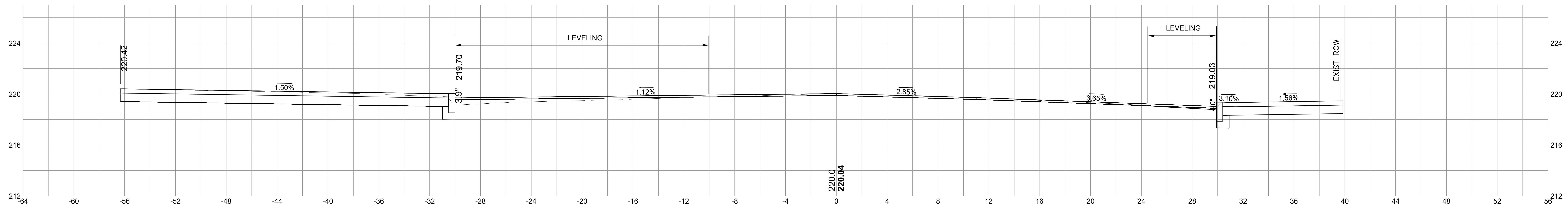

NUMBER	DATE	MADE BY	CHECKED BY	REVISIONS

DRAWN BY:
KY DW

DESIGNED BY:
KY

CHECKED BY:
DJ

REGISTERED PROFESSIONAL

KIEN Y. HO
CIVIL ENGINEER
No. 46431
Kien Y Ho
2/8/21

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MASSACHUSETTS AVENUE
LEXINGTON, MASSACHUSETTS

BETA JOB NO. 6331
ISSUE DATE 02/05/2021
SHEET NO. 81 OF 92

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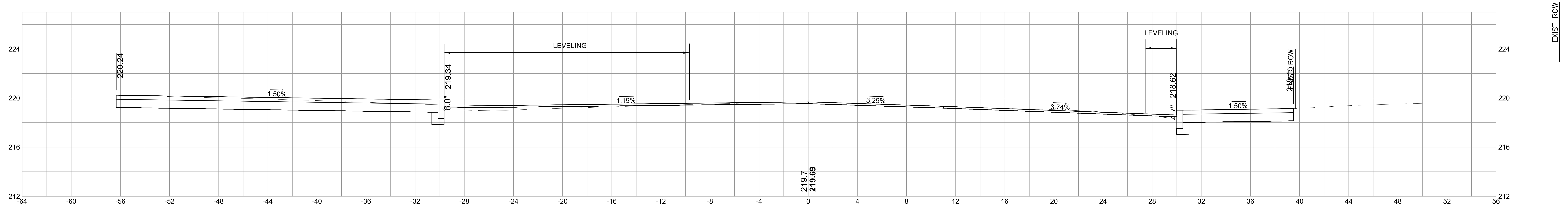
16+50



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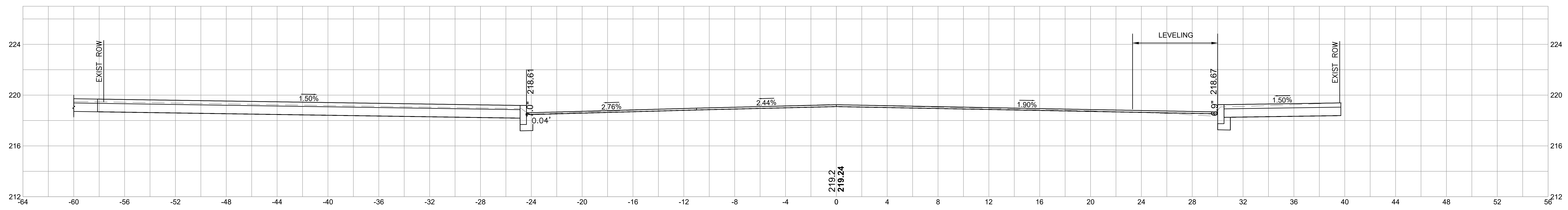

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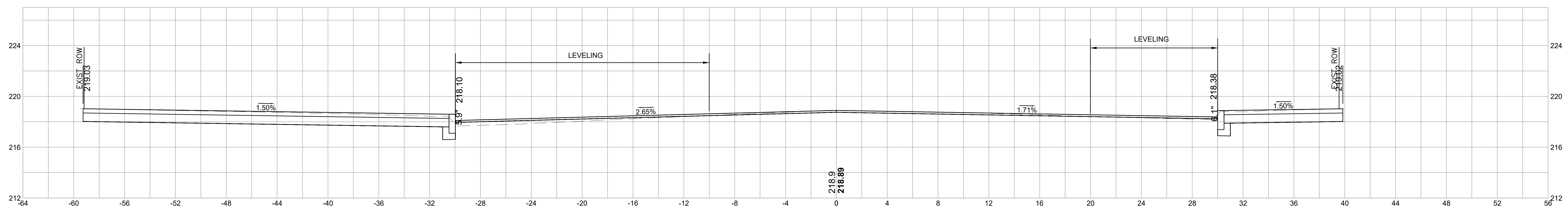

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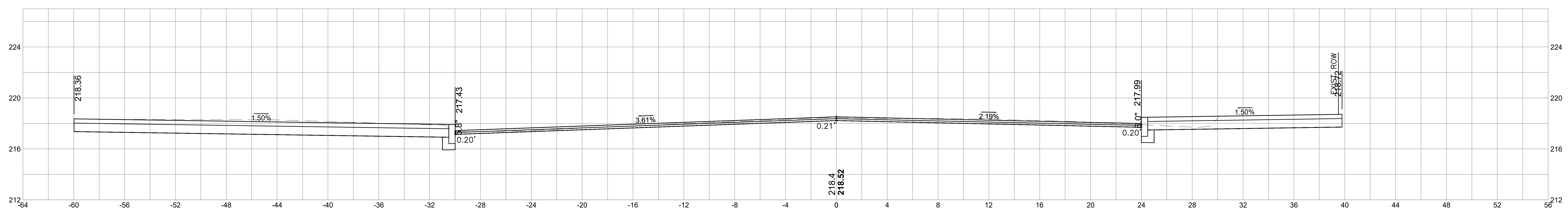

NUMBER	DATE	MADE BY	CHECKED BY	REVISIONS

DRAWN BY: KY DW

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REGISTERED PROFESSIONAL

KIEN Y. HO

2/8/21

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CROSS SECTIONS
MASSACHUSETTS AVENUE
LEXINGTON, MASSACHUSETTS

BETA JOB NO. 6331

ISSUE DATE 02/05/2021

SHEET NO. 82 OF 92

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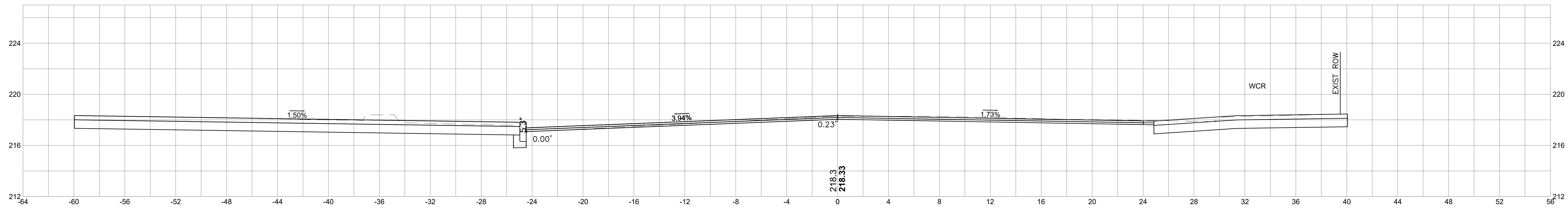
18+16



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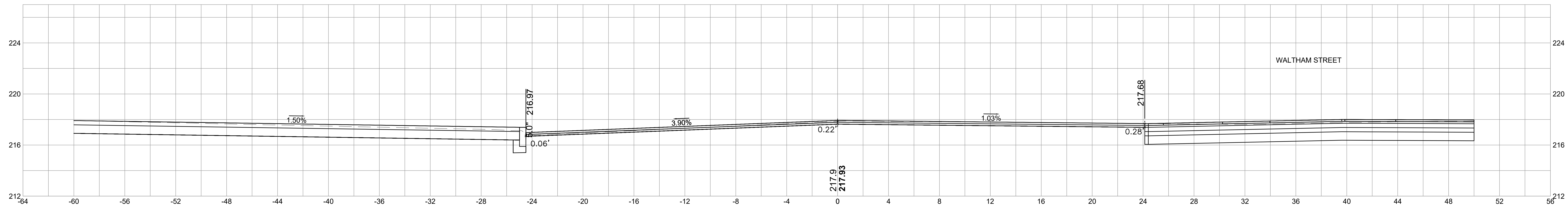

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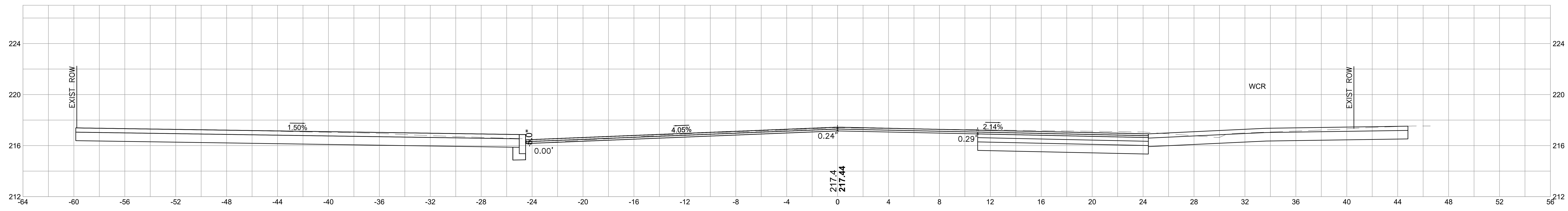

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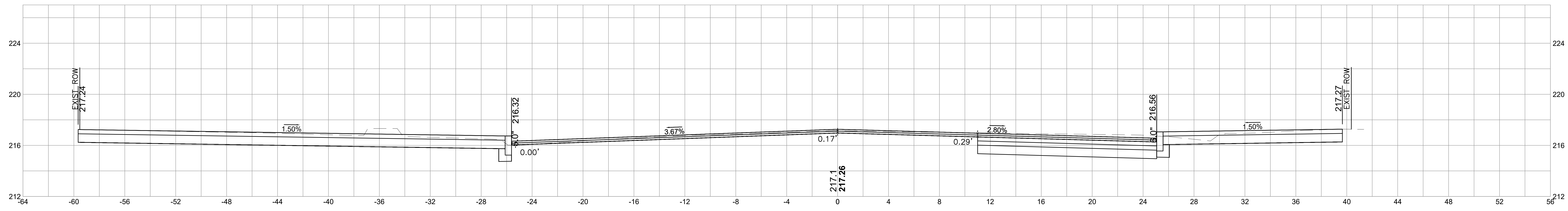

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NUMBER	DATE	MADE BY	CHECKED BY	REVISIONS

DRAWN BY:
KY DW

DESIGNED BY:
KY

CHECKED BY:
DJ

REGISTERED PROFESSIONAL

KIEN Y. HO
CIVIL ENGINEER
No. 46831
2/8/21

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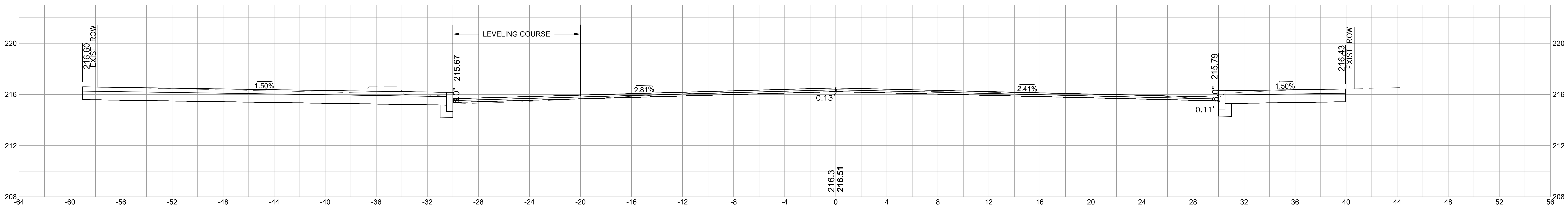
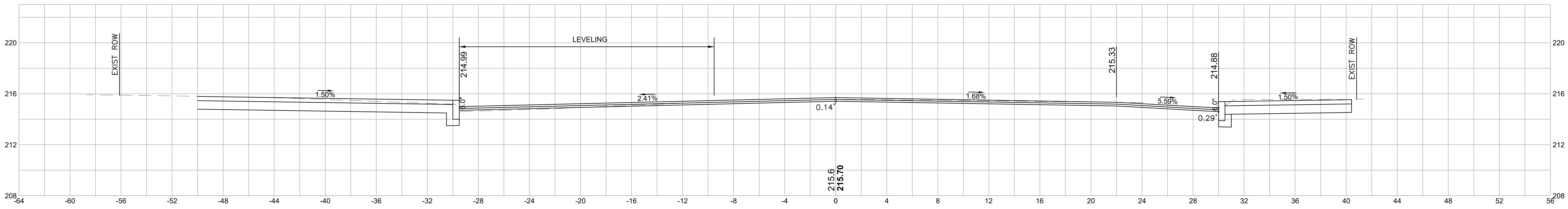
CROSS SECTIONS
MASSACHUSETTS AVENUE
LEXINGTON, MASSACHUSETTS

BETA JOB NO. 6331
ISSUE DATE 02/05/2021
SHEET NO. 83 OF 92

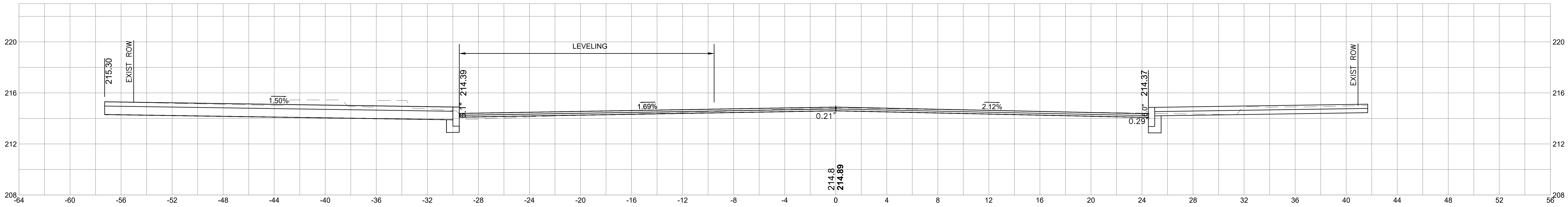
19+50



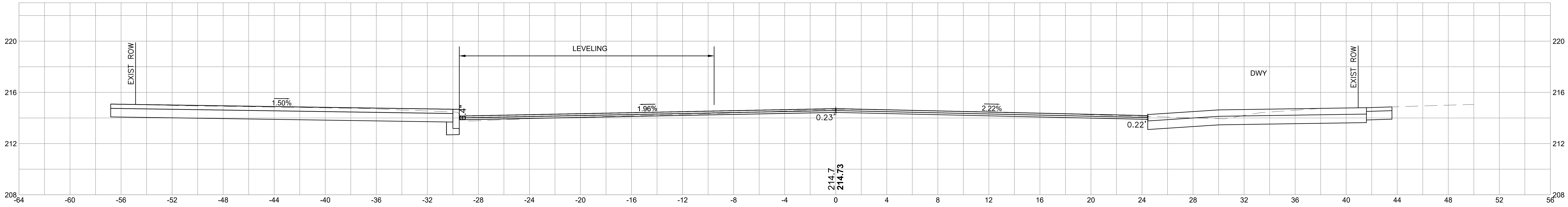
20+00



20+50



20+60



NUMBER	DATE	MADE BY	CHECKED BY	REVISIONS

DRAWN BY:
KY DW

DESIGNED BY:
KY

CHECKED BY:
DJ

REGISTERED PROFESSIONAL

KIEN Y.
HO
CIVIL ENGINEER
No. 46431

Kieng Ho
2/8/21

PREPARED BY

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SUBCONSULTANT

SCALE

4 0 4 8
SCALE IN FEET: 1"=4'

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TITLE

TOWN CENTER IMPROVEMENTS
CROSS SECTIONS
MASSACHUSETTS AVENUE
LEXINGTON, MASSACHUSETTS

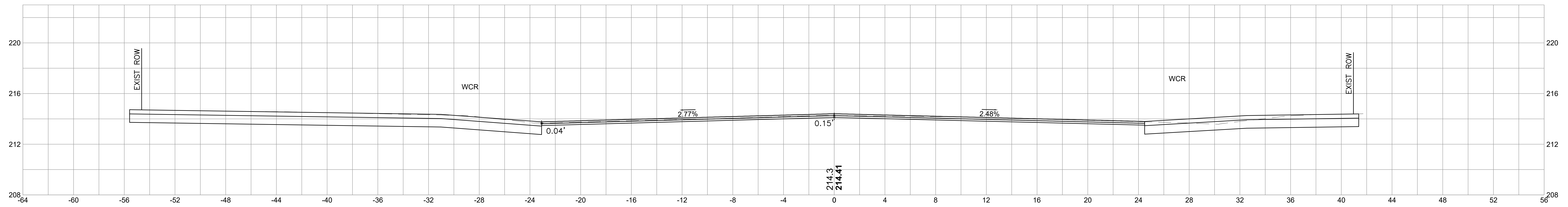
BETA JOB NO. 6331

ISSUE DATE 02/05/2021

SHEET NO. 84 OF 92

2/8/2021 12:38 PM O:\6300S\6331 - LEXINGTON CENTER STREETSCAPE\DRAWING FILES\PLANSET\6331 XSECTIONS.DWG (BETA STB BW.STB)

20+80



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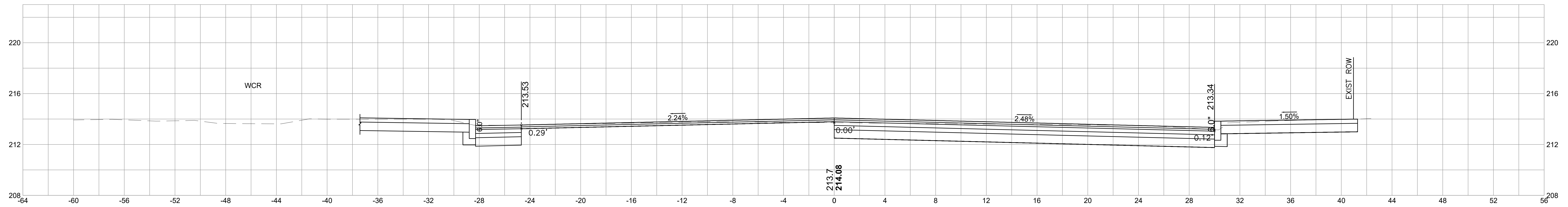
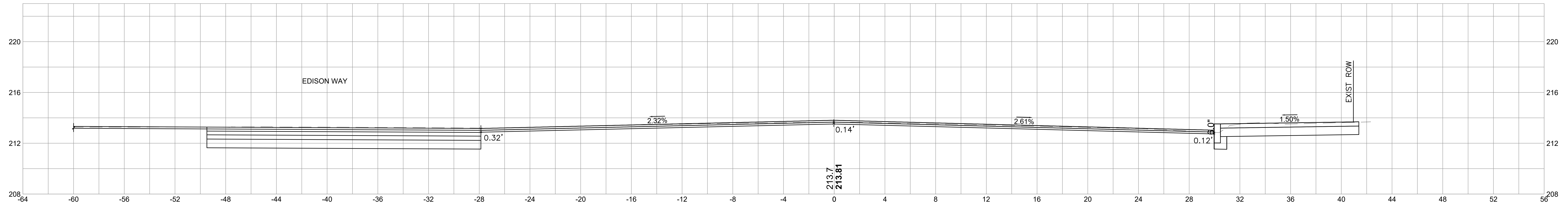


21+17



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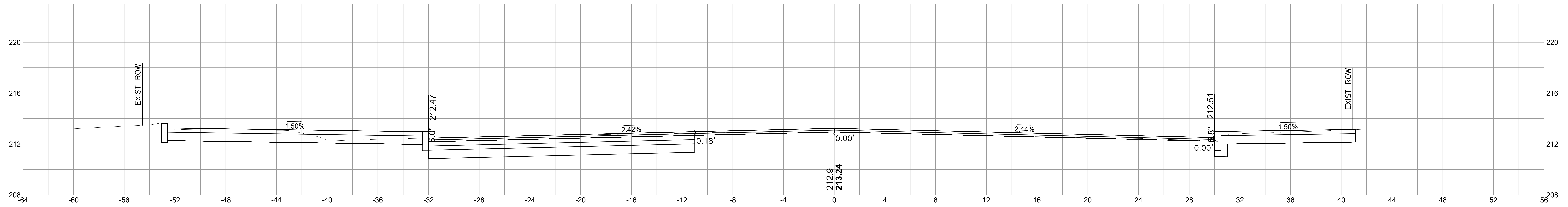

NUMBER	DATE	MADE BY	CHECKED BY	REVISIONS

DRAWN BY: KY DW

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CHECKED BY: DJ

REGISTERED PROFESSIONAL

KIEN Y. HO
CIVIL ENGINEER

Kieny Ho
2/8/21

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SCALE

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CROSS SECTIONS
MASSACHUSETTS AVENUE
LEXINGTON, MASSACHUSETTS

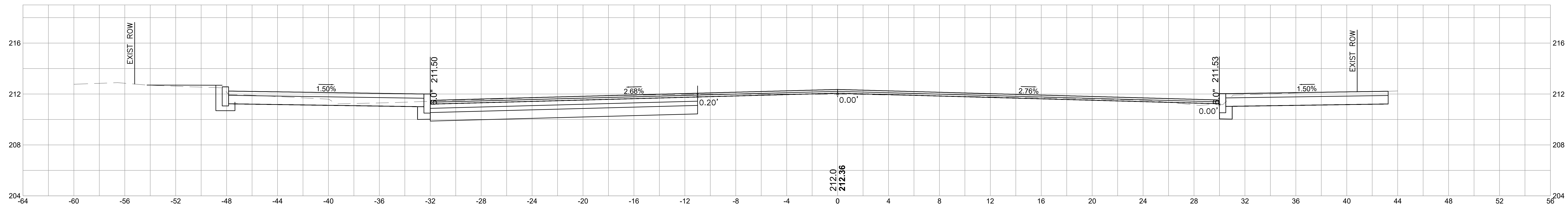
BETA JOB NO. 6331

ISSUE DATE 02/05/2021

SHEET NO. 85 OF 92

2/8/2021 12:38 PM O:\6300S\6331 - LEXINGTON CENTER STREETSCAPE\DRAWING FILES\PLANSET\6331 XSECTIONS.DWG (BETA STB BW.STB)

22+00



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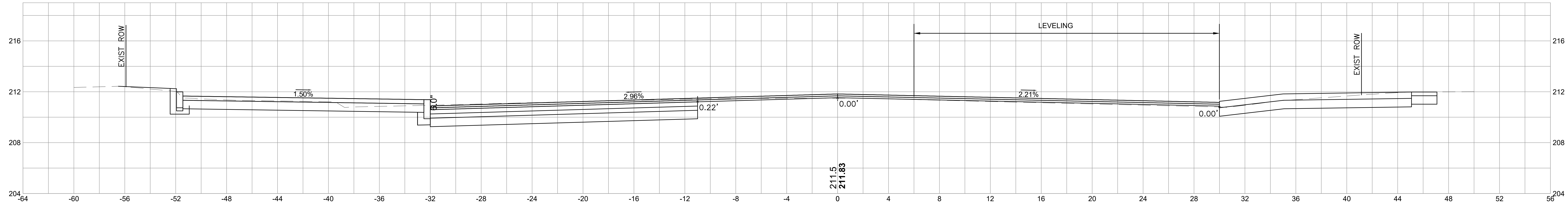
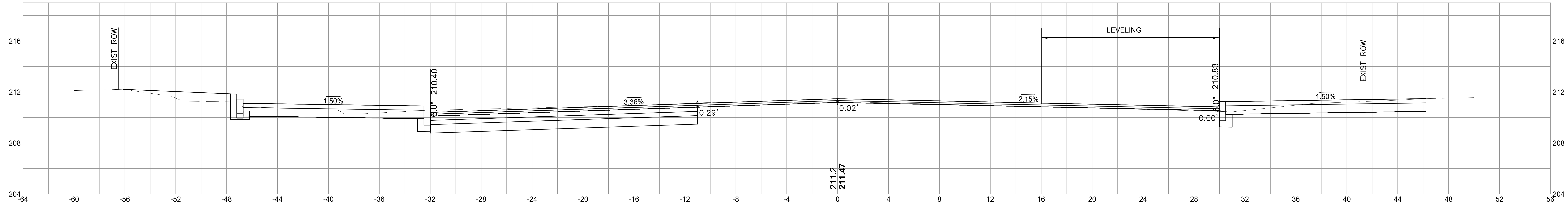
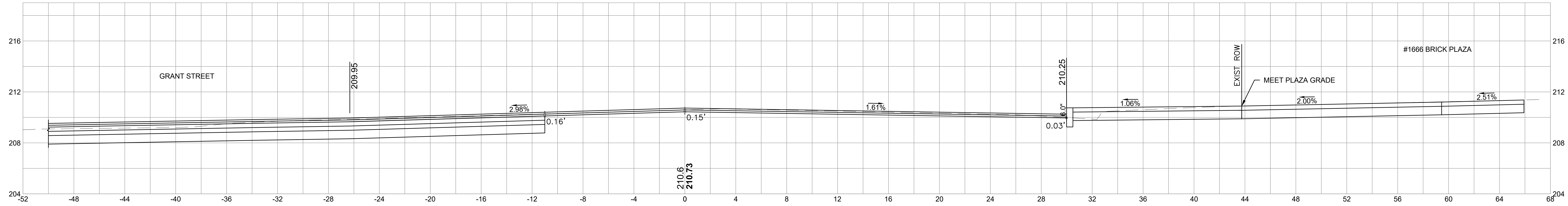


22+50



23+00



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ISSUE DATE 02/05/2021

SHEET NO. 86 OF 92

23+50

24+00

24+50

24+90

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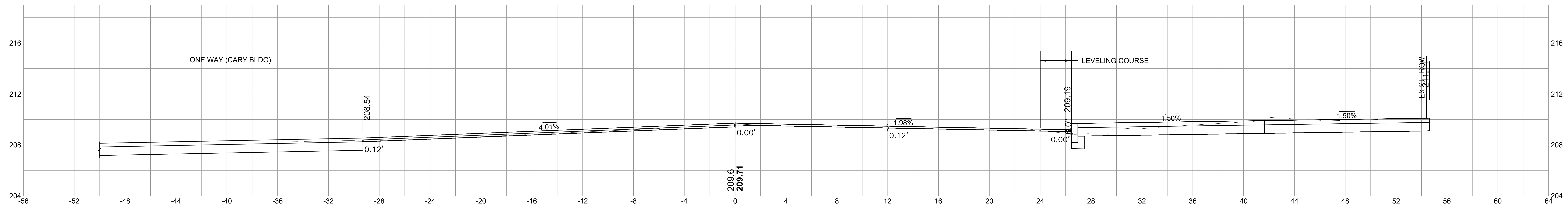
25+00



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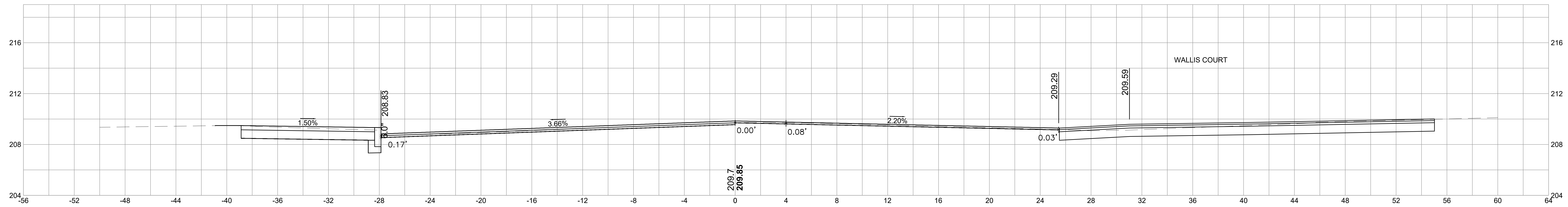
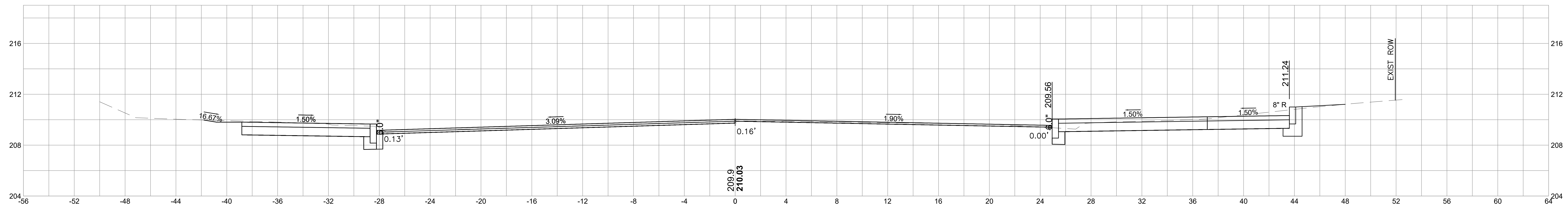
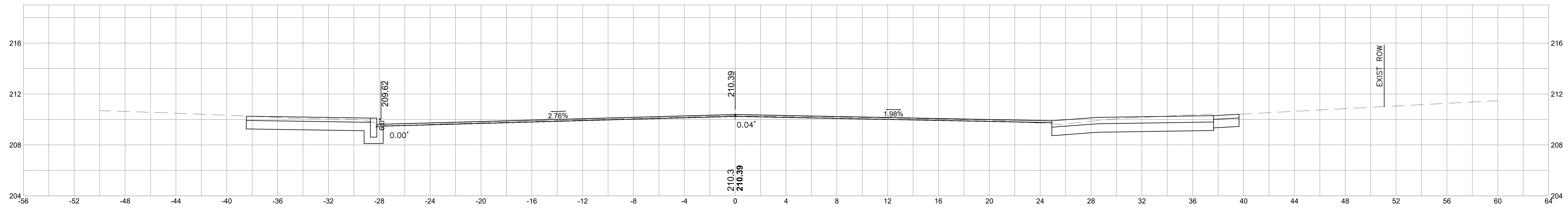


25+50



26+00



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MASSACHUSETTS AVENUE
LEXINGTON, MASSACHUSETTS

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SHEET NO. 88 OF 92

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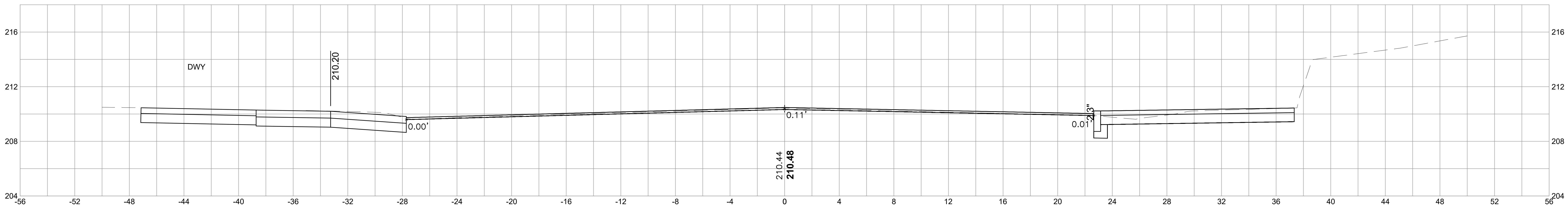
26+12



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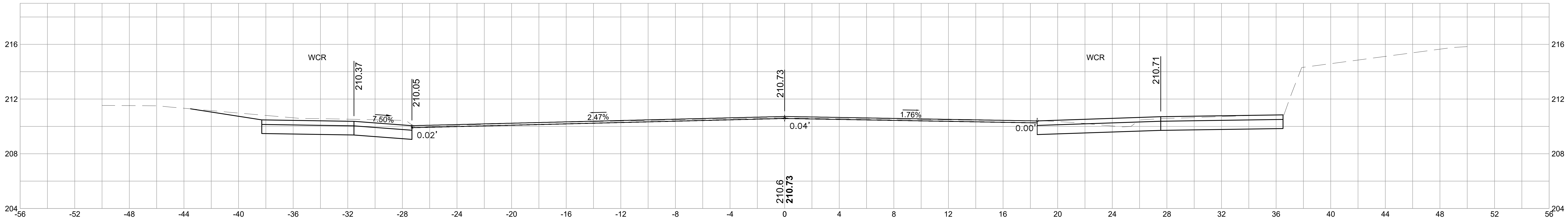

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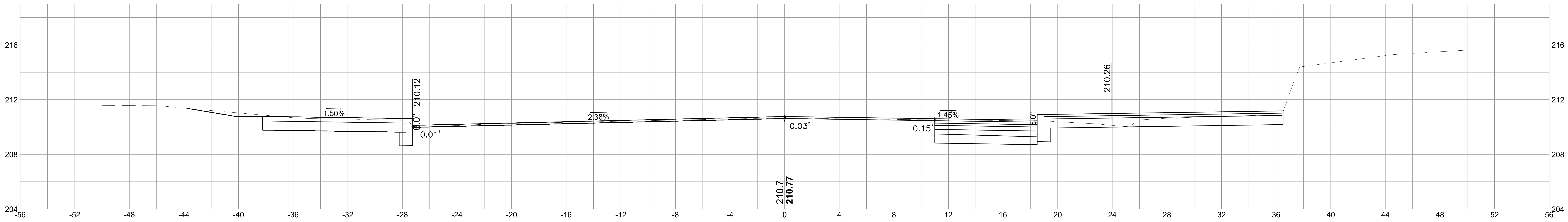

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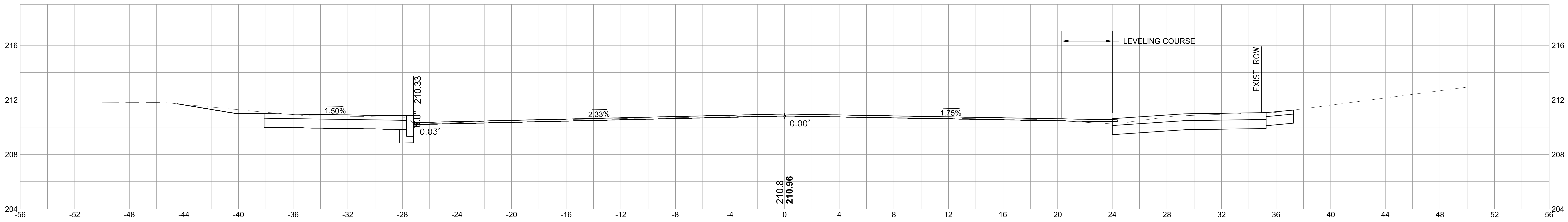

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TITLE

TOWN CENTER IMPROVEMENTS
CROSS SECTIONS
MASSACHUSETTS AVENUE
LEXINGTON, MASSACHUSETTS

BETA JOB NO. 6331
ISSUE DATE 02/05/2021
SHEET NO. 89 OF 92

2/8/2021 12:39 PM O:\6300S\6331 - LEXINGTON CENTER STREETSCAPE\DRAWING FILES\PLANSET\6331 XSECTIONS.DWG (BETA STB BW.STB)

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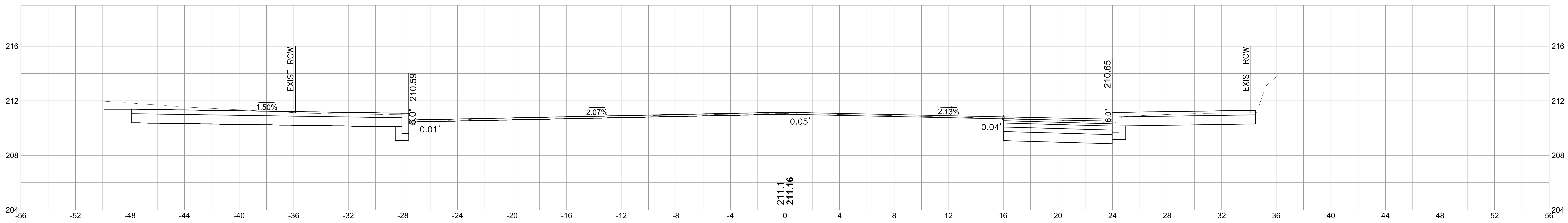

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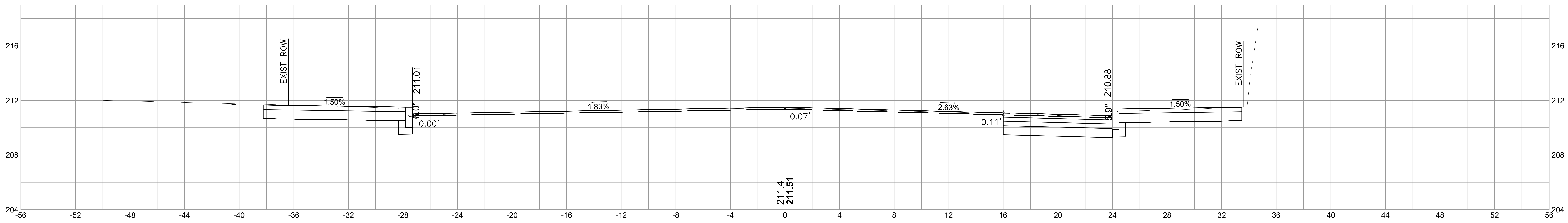

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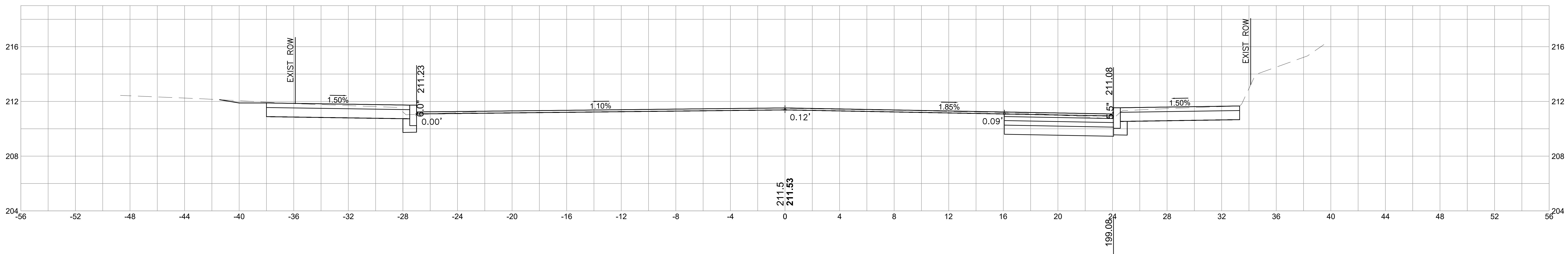

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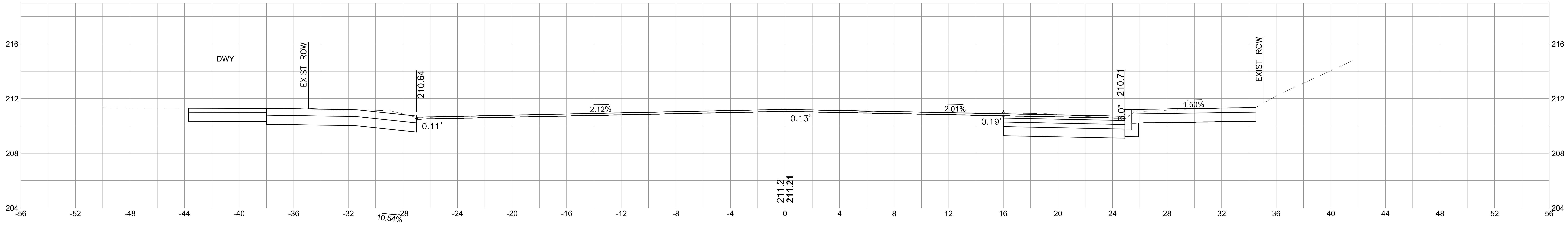

NUMBER	DATE	MADE BY	CHECKED BY	REVISIONS

DRAWN BY:
KY DW

DESIGNED BY:
KY

CHECKED BY:
DJ

REGISTERED PROFESSIONAL

KIEN Y. HO
CIVIL ENGINEER
No. 46[illegible]31

Kieny Ho
2/8/21

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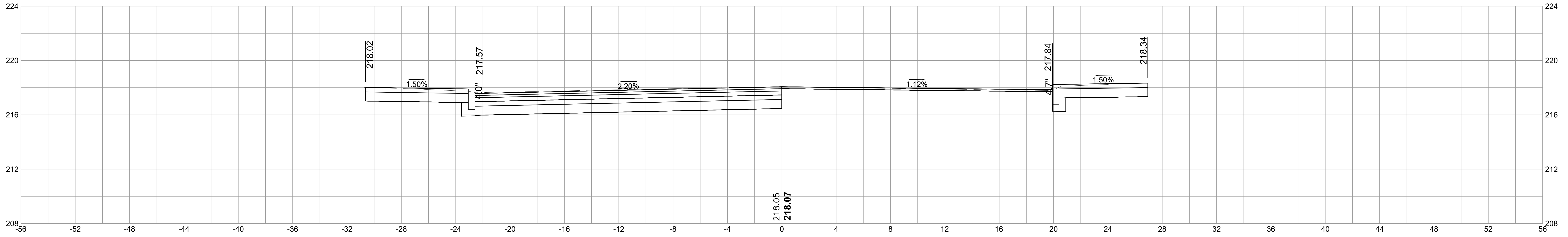

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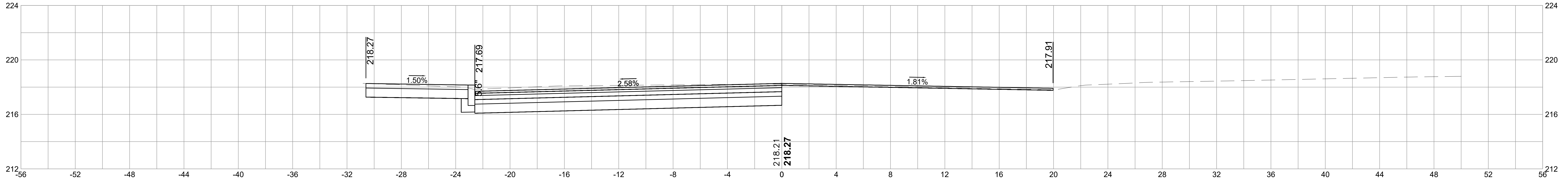

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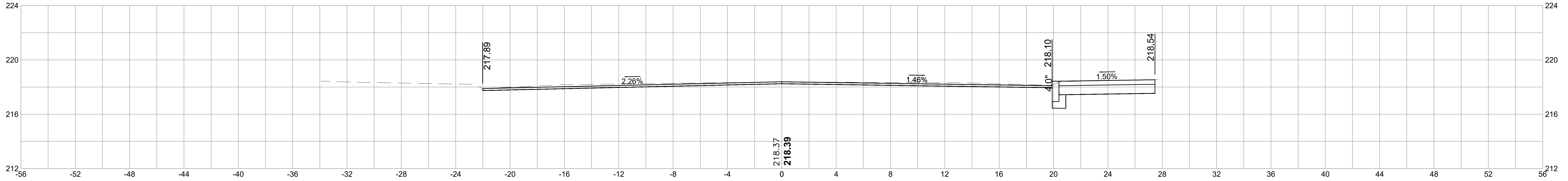

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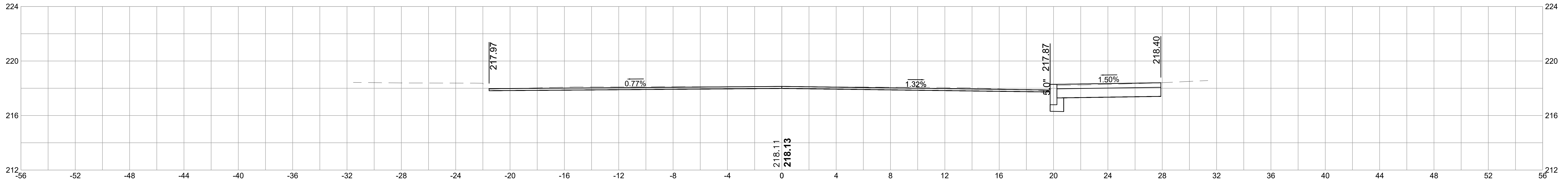

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CROSS SECTIONS
WALTHAM STREET
LEXINGTON, MASSACHUSETTS

BETA JOB NO. 6331

ISSUE DATE 02/05/2021

SHEET NO. 91 OF 92

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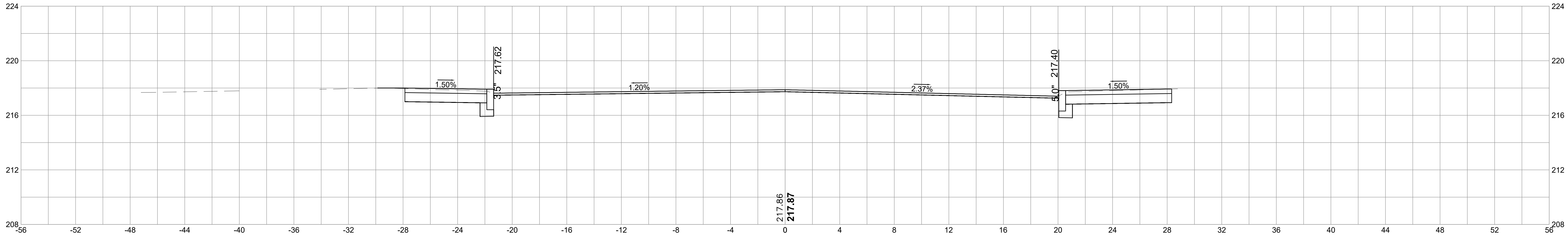

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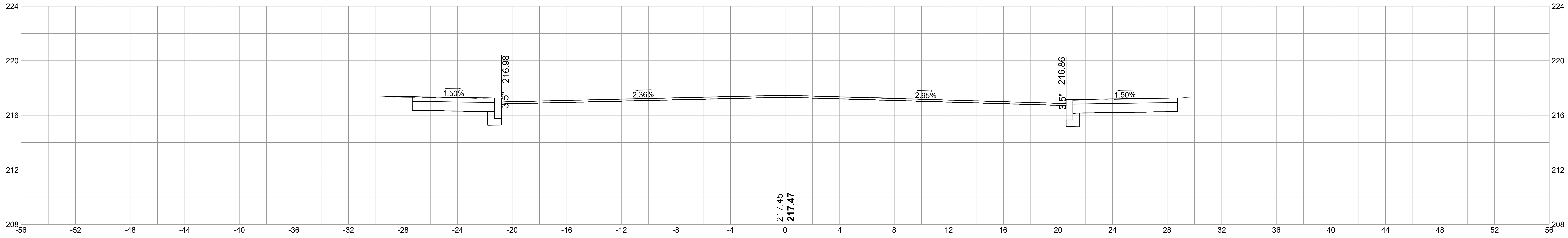

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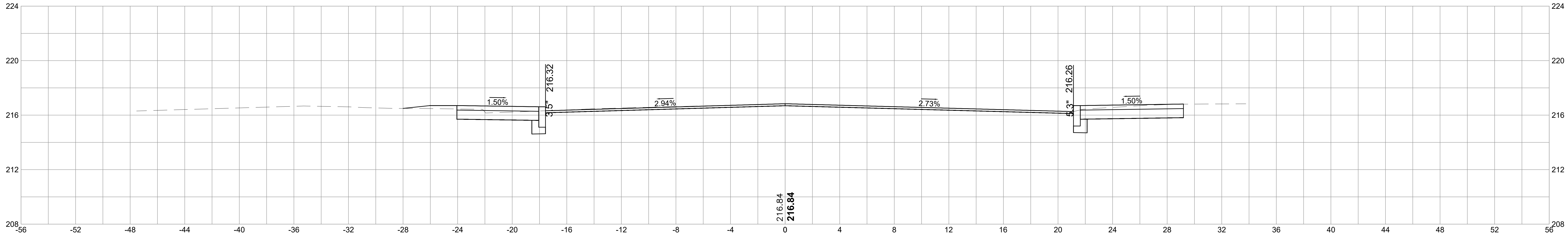

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